Commonwealth of Pennsylvania

DEPARTMENT OF AGRICULTURE

Bulletin No. 230

TABULATED ANALYSES OF

COMMERCIAL FERTILIZERS

From Samples Selected in Accordance with Act of May 1, 1909

BY THE PENNSYLVANIA DEPARTMENT OF AGRICULTURE

From January 1 to August 1, 1912

HARRISBURG:
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DEPARTMENT OF AGRICULTURE
COMMONWEALTH OF PENNSYLVANIA

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The Act of 1st May 1909, Commonly Referred to as "The New Fertilizer Law" is as Follows:

No. 205.

AN ACT

To regulate the manufacture and sale of commercial fertilizers; prescribing penalties for its violation, and repealing an act, entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one.

Section 1. Be it enacted, &c., That every package of commercial fertilizer sold, offered, or exposed for sale, for manurial purposes within this Commonwealth, except the dung of domestic animals, lime, marl, and wood-ashes, shall have plainly stamped thereon the name and address of the manufacturer or importer and his place of business, the net weight of the contents of the package, the brand or trade-name of the fertilizer the package contains, and an analysis stating the percentage such fertilizer contains of nitrogen in an available form, of potash soluble in water, of soluble and reverted phosphoric acid, and of insoluble phosphoric acid.

Section 2. Every manufacturer or importer of commercial fertilizers, as specified in section one of this act, shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture a statement of the names and number of brands of such commercial fertilizers, having distinct trade-names, that he shall offer for sale during the next ensuing year, and a copy of the analysis of each one of such brands of commercial fertilizers, as required by section one of this act.

Section 3. In addition to the statement required by section two of this act, every manufacturer or importer of commercial fertilizers shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture an affidavit showing the amount of each brand of fertilizer, having a distinct trade-name, sold within the Commonwealth during the last preceding year; and if the said amount shall be one hundred tons or less, he or they shall pay or cause to be paid to the Secretary of Agriculture the sum of fifteen dollars for each and every brand of such commercial fertilizer, having a distinct trade name sold within the State during the last preceding year:

and if the said amount shall exceed one hundred tons, and be less than five hundred tons, he or they shall pay the sum of twenty dollars, as aforesaid; and if the said amount shall be five hundred tons or more, he or they shall pay the sum of thirty dollars, as aforesaid. If such manufacturer or manufacturers, importer or importers, shall not have made any sales within the Commonwealth during the preceding year, he or they shall pay the sum of fifteen dollars upon each such brand, as aforesaid: Provided, That all monies so received shall be immediately paid by the Secretary of Agriculture into the State Treasury, for the use of the Commonwealth.

Section 4. No person shall sell, offer, or expose for sale, in this State, any pulverized leather, hair, ground hoofs, horns, or wool waste, raw, steamed, roasted, or in any form, as a fertilizer, or as an ingredient of a fertilizer or manure, without an explicit statement of the fact; said statement to be conspicuously affixed to every package of such fertilizer or manure, and to accompany and go with every lot, parcel, or package of the same.

Section 5. Any person or persons selling, offering, or exposing for sale, any commercial fertilizer or any brand of the same, having a distinct trade-name, without the analysis required by section one of this act, or with an analysis stating that it contins a larger percentage of any one or more of the above-named constituents than is contained therein, or for the sale of which all the provisions of sections two and three have not been complied with, or any person violating any of the provisions of section four of this act, shall be guilty of a misdemeanor, and, on conviction, shall be sentenced to pay a fine of not less than twenty-five nor more than one hundred dollars for the first offense, and not less than two hundred dollars for each subsequent offense. It shall be the duty of the Secretary of Agriculture to enforce the provisions of this act, and all penalties, costs, and fines recovered shall be paid to him or his duly authorized agent, and by him shall be immediately paid into the State Treasury, for the use of the Commonwealth.

Section 6. The Secretary of Agriculture is hereby empowered to collect samples of commercial fertilizers, either in person or by his duly qualified agent or representative, and to have them analyzed, and to publish the results for the information of the public; and for this purpose the said Secretary of Agriculture, such assistants, agents, experts, chemists, detectives, and counsel as he shall duly authorize, shall have full access, ingress, and egress to and from all places of business, factories, barns, buildings, carriages, cars, and vessels, used in the manufacture and transportation, or sale, or any commercial fertilizer. They shall

also have power to open any package or vessel containing or supposed to contain any commercial fertilizer, and take therefrom samples for analysis, upon tendering the value of said samples.

Section 7. The term "commercial fertilizers," as used in this act, shall be construed to mean any and every substance imported, manufactured, prepared, or sold for fertilizing or manuring purposes, except the dung of domestic animals, marl, lime, and wood-ashes, and not exempt by the provisions of section one of this act.

Section 8. This act shall go into effect on and after the thirty-first day of July, one thousand nine hundred and nine; and the act, entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one, is hereby repealed.

Approved—The 1st day of May, A. D. 1909.

EDWIN S. STUART

No. 95.

AN ACT

Making it unlawful for any person, firm, or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone; and providing a penalty for violation of the same.

Section 1. Be it enacted, &c., That it shall be unlawful for any person, firm or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone.

Section 2. Any person or persons violating the provisions of this act shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall pay a fine of fifty dollars for the first offense, and a fine of not less than one hundred dollars, nor more than two hundred dollars, for every subsequent offense; such fine or fines to be paid into the State Treasury, for the use of the Commonwealth. The Secretary of Agriculture shall, together with his deputies, agents, and assistants, be charged with the enforcement of this act.

Section 3. All magistrates, aldermen, and justices of the peace throughout this Commonwealth shall have jurisdiction to hear and determine actions arising from violations of the provisions of this act, and shall have authority to hold for court, or to impose the penalty hereby prescribed, subject to appeal, as the law shall direct.

Section 4. This act shall go into effect on the first day of January, Anno Domini nineteen hundred and ten.

Approved—The 23d day of April, A. D. 1909.

EDWIN S. STUART.

State College, Pa., *July 18, 1912.*

Hon. N. B. Critchfield, *Secretary of Agriculture, Harrisburg, Pa.:*

Dear Sir: I have the honor to transmit herewith my report upon the analyses of the samples of commercial fertilizers received from official sampling agents during the spring season of 1912.

Very respectfully,

WM. FREAR,
Vice-Director and Chemist.

The Penna. State College Agricultural Experiment Station.

FERTILIZER VALUATIONS.

The object of an official valuation of commercial fertilizers is to enable the consumer to judge approximately whether he has been asked to pay for a given brand more than the fertilizing ingredients it contains and market conditions prevailing at the time would warrant. It is clear, therefore, that no attempt is made in this valuation to indicate whether the fertilizer valued possesses a greater or less crop-producing capacity than another fertilizer; but only whether it is higher priced than another of the same general composition.

For this purpose the valuation must be so computed as to include all the elements entering into the cost of a fertilizer as it is delivered to the consumer. These elements may conveniently be grouped as follows:

1. The wholesale cost of the ingredients.
2. The jobbers' gross profit on the sale of the ingredients; this includes office expenses, advertising, losses, etc.; for the purpose of the present computation it may be assumed that the sum of this gross profit and the wholesale cost of the ingredients, is equivalent to the retail price of the single ingredients near the wholesale markets in ton lots of original packages for cash.
3. The expense and profit of mixing: This item applies only to complete fertilizers, rock and potash, and ammoniated rock; not to dissolved or ground bone, or to dissolved rock.
4. The expense and profit of bagging.
5. Agents' commission: This item includes not only the commission proper, but every advance in price due to the sale of the goods through an agent in small quantities on time, rather than directly to the consumer in ton lots for cash.
6. Freight from the wholesale market to the point of delivery.

The valuations for 1912 were based:

1. Upon the wholesale prices from September 1, 1911; to March 1, 1912, of the raw materials used in fertilizer manufacture, the quotations of the New York market being adopted for all materials except acidulated phosphate rock and ground bone.
2. Upon an allowance of 20 per cent. of the wholesale prices, above mentioned, to cover jobbers' gross profit.

By adding the 20 per cent. allowed for jobbers' gross profit to the wholesale price of the several raw materials, the retail price in original packages at the jobbers' warehouse is obtained.

Since the amount of the several valuable fertilizing constituents in the various raw materials is known, it is a simple matter to determine the corresponding retail value per pound of the valuable fertilizing constituents yielded by each raw material. A schedule of these pound values affords a convenient basis of computation of the value per ton of various fertilizers, whose composition is ascertained by analysis.

The values assigned, for the present, to the other elements in the cost of the fertilizer at the point of delivery are:

3. For mixing, $1.00 per ton.

4. For bagging, $1.00 per ton, in all cases except those in which the article was sold in original packages; the cost of the package being, in such cases, included in the wholesale price.

5. For agents' commission, 20 per cent. of the cost of the goods f o. b. at the jobbers' or mixers' warehouse.

6. For freight, $2.00 per ton; the cost of the freight in lots of twelve tons or over, from the seaboard to Harrisburg, averaging $1.88 per ton.

The following valuation of dissolved South Carolina rock illustrates the method:

Phosphoric Acid.	%	Weight per ton.	
Available,	14.00	280 lbs. at 3c,	$8.40
Insoluble,	1.00	20 lbs. at 1½c,	.30
Retail cash value of ingredients,			8.70
Bagging,			1.00
Cash value of goods ready for shipment,			9.70
Agents' commission, 20 per cent.,			1.94
Freight,			2.00
Commercial value per ton,			$13.64

It is not to be expected, of course, that the valuations thus computed will precisely represent the fair price to be charged for a brand in each locality and in every transaction. Market conditions, competition, distance from factory, all introduce minor variations. Nevertheless, to make the approximation reasonably close the average valuation of a given class of goods ought to agree closely with its ascertained average selling price. Whenever such an agreement is no longer obtained by the use of a schedule, it is evident that the schedule of retail values of the constituents, or the added allowances for mixing, etc., requires revision.

It is needful to note here another factor greatly affecting the practical accuracy of these approximations. Their computation would offer little difficulty and their usefulness be far greater, if, by the

ordinary methods of analysis, the exact nature of the ingredients used to supply the several fertilizer constituents, were capable of certain determination. This is, however, possible to-day to only a limited extent. The valuations are therefore based on the assumption that the fertilizers are uniformly compounded from high quality ingredients, such as are commonly employed in the manufacture of fertilizers of the several classes. Consumers should carefully avoid the error of accepting such valuations as infallible; they are not designed to be used for close comparisons of single brands, but only to indicate whether the price asked for a fertilizer is abnormal, assuming good quality for the ingredients used. From this it is clear that, *except as high freights may require, the selling price of a brand should not far exceed the valuation; but that a fertilizer may be made of inferior materials and yet have a high valuation.*

The valuations used during 1911 were modified for use during 1912 in accordance with the changes in wholesale prices of fertilizing ingredients and to make the valuations more closely follow the selling price.

The following comparative statement shows the valuations and selling prices of the several classes of fertilizers during 1907 to 1911.

Fertilizers.	Number of samples.	Valuation.	Selling price.	Difference of valuation from selling price.
Spring, 1907.				
Complete	424	26.84	24.60	2.24
Rock-and-potash	103	16.63	16.94	—.31
Dissolved bone	6	25.08	22.28	2.80
Ground bone	27	29.64	31.55	—1.91
Dissolved rock	41	14.72	14.64	.08
Fall, 1907.				
Complete	280	24.59	22.71	1.88
Rock-and-potash	96	15.82	16.58	—.76
Dissolved bone	8	27.61	22.09	5.52
Ground bone	36	28.80	28.92	.12
Dissolved rock	48	14.67	14.76	.09
Spring, 1908.				
Complete	455	26.23	25.69	.54
Rock-and-potash	108	16.24	16.96	—.62
Dissolved bone	4	23.09	21.11	1.98
Ground bone	21	28.96	29.04	—.08
Dissolved rock	33	14.92	14.72	.20
Fall, 1908.				
Complete	287	23.88	22.34	1.54
Rock-and-potash	104	16.17	16.43	—.26
Dissolved bone	6	26.05	22.48	3.57
Ground bone	30	27.90	29.18	—1.28
Dissolved rock	49	14.86	14.31	.55

Fertilizers.	Number of samples.	Valuation.	Selling price.	Difference of valuation from selling price.
Spring, 1909.				
Complete,	426	25.31	24.88	—.43
Rock-and-potash,	111	15.94	16.98	—1.40
Dissolved bone,	8	21.57	22.25	—.68
Ground bone,	24	30.28	30.70	—.42
Dissolved rock,	33	13.62	14.76	—1.14
Fall, 1909.				
Complete,	255	22.25	22.07	.14
Rock-and-potash,	92	15.50	16.10	—.60
Dissolved bone,	3	22.85	24.50	—1.65
Ground bone,	26	28.71	29.39	—.68
Dissolved rock,	41	14.02	13.86	.16
Spring, 1910.				
Complete,	436	26.63	25.26	1.37
Rock-and-potash,	123	16.08	17.16	—1.08
Dissolved bone,	8	21.47	22.17	—.70
Ground bone,	24	30.27	30.19	.08
Dissolved rock,	47	14.00	14.56	—.56
Fall, 1910.				
Complete,	294	22.24	21.76	.48
Rock-and-potash,	109	16.34	16.38	—.04
Dissolved bone,	4	25.70	25.80	—.10
Ground bone,	29	31.10	29.98	1.12
Dissolved rock,	32	14.15	14.01	.14
Spring, 1911.				
Complete,	485	25.95	24.97	.98
Rock-and-potash,	129	15.99	17.05	—1.06
Dissolved bone,	6	23.82	20.33	3.37
Ground bone,	23	31.47	30.93	.54
Dissolved rock,	51	14.86	15.83	—1.58
Fall, 1911.				
Complete,	292	22.33	21.73	.61
Rock-and-potash,	129	16.07	16.25	—.18
Dissolved bone,	3	21.51	24.88	—3.37
Ground bone,	25	31.18	31.17	.01
Dissolved rock,	42	13.78	14.00	.22

The following statement from the weekly reports of the Oil, Paint and Drug Reporter, of New York City, shows the average wholesale prices of fertilizer raw materials from September 1, 1910, to March 1, 1911, and from September 1, 1911, to March 1, 1912.

Wholesale Prices of Fertilizer Ingredients, New York, Oil Paint and Drug Reporter.

Substance.	Amount priced.	Average price Sept. 1, 1910, to March 1, 1911.	Average price Sept. 1, 1911, to March 1, 1912.	Prices Sept.-March, 1911-1912, in per cent. of prics 1910-1911.
Sulphate of ammonia,	Cwt.,	2.945	3.196	108.5
Nitrate of soda,	Cwt.,	2.1236	2.224	104.9
Dried blood, H. G.,	Unit (20 lbs.),	3.295	3.019	91.6
Concentrated tankage,	Unit (20 lbs.),	2.78	2.542	91.1
Rough bone,	Ton,	21.50	23.12	107.5
Bone meal,	Ton,	23.25	24.12	103.2
Fish guano, dry,	Unit (20 lbs.),	3.073	3.228	108.3
Phosphate rock, Tenn.,	Ton,	5.25	5.25	100.0
Acid phosphate,	Unit (20 lbs.),	.635	.525	82.8
Double manure salt,	Ton,	22.75	24.66	108.4
Sulphate of potash,	Ton,	43.50	46.58	107.1
Kainit,	Ton,	7.50	8.333	111.1
Muriate of potash,	Ton,	35.75	38.18	106.4
Sulphuric acid, 66 degrees B.,	Cwt.,	1.05	1.05	100.0

In ammoniates such as dried blood and fish guano, the unit is of ammonia, of which 82.25 per cent. is nitrogen; in acid phosphate the unit is of phosphoric acid (phosphorus pentoxid).

There has been a slight decrease in price in some of the organic ammoniates, due probably to the record cotton crop in the South, and the increased demand for sulphate of ammonia and nitrate of soda, both of which increased slightly in price.

Acid phosphate is lower, while phosphate rock and sulphuric acid show no change in price compared with last year, the price per short ton having remained constant throughout the year at $5.25 for Tennessee phosphate.

Potash Salts: The New York Oil Paint and Drug Reporter gives the following imports of potash salts for the years 1910 and 1911, which show constantly increasing consumption.

	1910	1911
Muriate of potash,	381,873,875	509,254,846
Sulphate of potash,	86,162,874	121,039,192
Kainit and manure salt,	377,778	737,852

A compromise has at last been reached in the much mooted "Potash Controversy," the American holders having relinquished their old

contracts and entered into new ones with German Syndicate which is more firmly entrenched than ever. The price of potash salts have increased sightly.

Composition of Raw Materials.—In order to form a correct idea of the cost per pound of the fertilizer constituents of these materials, it is needful to determine their composition or, in other words, the quantities of valuable constituents each contains. The following table shows the composition of the raw materials used in the manufacture of fertilizers. Few analyses of these materials, with the exception of ground bone and dissolved rock, have been made in Pennsylvania. The figures in the following table include the averages of the results of analyses made in Connecticut, New Jersey and Massachusetts during the past year, except in the case of ground bone and dissolved rock phosphates, where Pennsylvania results alone are included.

Composition of Non-Acidulated Fertilizer Ingredients. (Per Cent.)

Substance.	Number of samples analyzed.	Nitrogen.	Potash.	Total phosphoric acid.
Sulphate of ammonia,	11	20.07	----------	----------
Nitrate of soda,	13	15.42	----------	----------
Dried blood,	18	11.35	----------	----------
Ground bone,	25	3.20	----------	21.05
Tankage,	28	6.33	----------	11 60
Ground fish,	10	8.48	----------	7.06
Cottonseed meal,	273	6.97	----------	----------
Castor pomace,	8	4.96	----------	----------
Sulphate of potash,	5	----------	50.24	----------
Muriate of potash,	16	----------	50.61	----------
Kainit,	9	----------	13.53	----------
Double sulphate of potash and magnesia,	3	----------	27.66	----------

Composition of Acidulated Fertilizer Ingredients (Per Cent.)

	Number of samples.	Total phosphoric acid.	Insoluble phosphoric acid.	Nitrogen.
Dissolved bone,	3	12.10	1.70	1.90
Dissolved phosphate rock,	41	15.49	1.18	----------

Cost per Pound of Fertilizer Constituents.—With the composition of these raw materials and their price per ton, hundred weight, or other unit of measure as a basis, the wholesale cost per pound of the valuable constituents can readily be calculated. In many cases the ammoniates are quoted "per unit of ammonia," the term unit being equivalent to per cent.; in goods sold by the ton of 2,000 lbs., the unit is equal to 20 lbs., and 20 lbs. of ammonia contain 16,47 lbs. of nitrogen.

In the case of refuse bone-back, unacidulated, the mean, 28.25 per cent. of phosphoric acid, is assumed to represent the average material on the market.

Phosphate rock is sold by the ton of 2,240 lbs., and on the basis of the bone phosphate of lime it contains, with drawbacks for injurious constituents. Bone-phosphate of lime contains 45.8 per cent. of phosphoric acid; therefore, each per cent .of bone phosphate in a long ton is equivalent to 22.4 lbs., and contains 10.26 lbs. of phosphoric acid.

In the wholesale trade, dried blood, azotine, concentrated tankage and hoof meals are usually sold on the basis of ammonia, disregarding the phosphoric acid present.

Insoluble phosphoric acid in dissolved rock is likewise omitted from consideration, contracts, being based solely upon the "available" phosphoric acid; nor in rock phosphates is any claim made for the small quantities of nitrogen and potash they contain, nor in dissolved bone for the potash present.

Under these conditions, the wholesale cost per pound in New York of the valuable constiteuents of such materials as furnish but a single fertilizing element, these materials being assumed to be in the state of preparation and in the packing in which the manufacturer purchased them, are given in the following table; also a figure representing a fair retail price at the factory, the materials having undergone no change in treatment or packing and the allowance for expenses and profit in retailing being 20 per cent.

Wholesale Cost per Pound of Fertilizing Constituents, New York.
I. Ingredients Supplying One Constituent.

Materials.	Constituent Valued.	Wholesale price, cents.	Wholesale price plus 20 per cent., cents.
Sulphate of ammonia,	Nitrogen,	15.98	19.18
Nitrate of soda,	Nitrogen,	14.42	17.30
Dried blood,	Nitrogen,	18.35	22.02
Concentrated tankage,	Nitrogen,	15.45	18.54
Phosphate rock, Tenn., 78 per cent.,	Phosphoric acid, total,*	.73	.88
Acid phosphate,	Phosphoric acid, available,	2.63	3.16
Double sulphate of potash and magnesia,	Potash,	4.45	5.34
Sulphate of potash,	Potash,	4.63	5.55
Kainit,	Potash,	3.07	3.68
Muriate of potash,	Potash,	3.77	4.52

*The prices of phosphate rock are f. o. b. at the respective points of shipment, not New York. The prices for potash are taken from the schedule of the syndicate, and those of the remainder from the Oil, Paint and Drug Reporter.

The quotations for bone are given without specific reference to quality, so that it is impossible, from these data, fairly to apportion their several wholesale values to the nitrogen and phosphoric acid contained in this material. As compared with tankage, the general tendency is to assign a higher commercial rating to the phosphoric acid in bone, and to nitrogen, a rating not very different from that given in tankage.

In former years, the value assigned to the nitrogen has been the same as that quoted on crushed tankage, c. a. f. Baltimore. In later years, quotations for both crushed tankage and ground tankage have not been available, and for that reason, the value of nitrogen is based upon the quotations for concentrated tankage.

In earlier years, quotations on ground tankage have been about 5 per cent. in advance of those on concentrated tankage, also quotations on crushed tankage were on an average 12.67 per cent. in advance of these on ground tankage. Increasing the price of concentrated tankage by these percentages we have $3.00 per unit of ammonia as the value assigned to the nitrogen in bone.

This is equivalent to $3.65 per unit of nitrogen.

The average composition of the ground bone and bone meal samples analyzed last fall in Pennsylvania was: Phosphoric acid, 21.05 per cent.; nitrogen 3.20 per cent.

The prepared bone contains less fat and moisture, and often less nitrogen than the ordinary rough bone, but these differences tend, in a measure, to neutralize each other. Assuming for the rough bone

quoted in the New York market the same composition as the bone meal sold in Pennsylvania, and for the value of the nitrogen $3.65 per unit, as previously stated, the values per pound of the several constituents would be:

Wholesale Cost per Pound of Fertilizer Constituents, New York.

II. BONE.

Materials	Constituent Valued.	Wholesale price, cents.	Wholesale price plus 20 pr cent.
Rough bone,	Nitrogen,	18.25	21.90
	Phosphoric acid,	2.71	3.25
Ground bone,	Nitrogen,	18.98	22.77
	Phosphoric acid,	2.82	3.38

Valuation in Neighboring States.

It is desirable, from all points of view, that the schedules of valuation throughout a district in which similar market conditions prevail, should differ as little as possible. It has been our practice in the past, to conform our schedule to that adopted after very careful co-operative study of market conditions for each year, by the New England States, New York and New Jersey, except where the peculiar conditions of our markets have made the valuations diverge too largely from the actual selling prices, as in the case of ground bone and dissolved rock phosphates. The schedules for these States for 1911 and 1912 are as follows:

Trade Values Adopted by the New England States and New Jersey.

	Cents per Pound.		Values in 1912 in per cent. of those in 1911.
	1911.	1912.	
Nitrogen:			
In nitrates,	16	16½	103.1
In ammonium salts,	16	16½	103.1
In dry and fine ground fish and blood,	23	22	95.7
In fine bone and tankage and mixed fertilizers,	20	19	95.0
In coarse bone and tankage,	15	15	100.0
Phosphoric acid:			
Water soluble,	4⅛	4⅛	100.0
Citrate soluble,	4	4	100.0
In fine ground bone and tankage,	4	4	100.0
In coarse bone and tankage,	3½	3½	100.0
In mixed fertilizers, insoluble,	2	2	100.0
Potash:			
In forms free from muriate,	5	5¼	105.0
As muriate,	4¼	4¼	100.0

Valuations in Pennsylvania.

For reasons stated on the previous page, the New England schedule has been followed in the case of mixed fertilizers and dissolved bones.

In the case of the dissolved rocks, the wholesale prices of raw materials used in their manufacture and of the available phosphoric acid itself, having shown no material change, the values used in the Pennsylvania schedule for 1911 were continued for use during the present year.

The entire schedule adopted for use in this State is presented in the following table:

Pennsylvania Schedule of Values for Fertilizer Ingredients, 1912.

	Cents per Pound.
Nitrogen:	
In ammonia salts,	16½
In nitrates,	16⅔
In meat, dried blood and mixed fertilizers,	19
In fine ground bone and tankage,	18
In coarse bone and tankage,	15
Phosphoric acid:	
Available, in bone fertilizers,	4¼
Available, in rock fertilizers,	3
Insoluble in ammonium citrate, in bone fertilizers,	2
Insoluble in ammonium citrate, in rock fertilizers,	1½
In fine bone, tankage and fish,	3¾
In coarse bone and tankage,	2¾
In cottonseed meal, castor pomace and wood ashes,	3½
Potash:	
In high grade sulphate or forms free from muriate,	5¼
As muriate,	4¼

Potash in excess of that equivalent to the chlorin present, will be valued as sulphate, and the remainder as muriate.

In certain cases where specific claim is made by the manufacturer that potash has been added as carbonate, potash in excess of that equivalent to soluble chlorides and soluble sulphates will be valued as carbonate.

Nitrogen in mixed fertilizers will be valued as derived from the best sources of organic nitrogen, unless clear evidence to the contrary is obtained.

Phosphoric acid in mixed fertilizers is valued at bone phosphoric acid prices, unless clearly found to be derived from rock phosphate.

Bone is sifted into two grades of fineness: Fine, less than 1-50 inch in diameter; coarse, over 1-50 inch in diameter.

The result obtained by the use of this schedule does not cover the items of mixing, bagging, freight and agents' commission. To cover these, allowances are made as follows:

For freight, an allowance of $2.00 per ton on all fertilizers.

For bagging, an allowance of $1.00 per ton on all fertilizers, except when sold in original packages.

For mixing, an allowance of $1.00 per ton on complete fertilizers and rock-and-potash goods.

For agents' commission, an allowance of 20 per cent. is added to the cash value of the goods ready for shipment.

FERTILIZER ANALYSES JANUARY 1 TO AUGUST 1, 1912.

Since January 1, 1912, there have been received from authorized sampling agents two thousand and thirty-four fertilizer samples, of which seven hundred and fifteen were subjected to analysis. Preference is given to those which have not been recently analyzed. In cases where two or more samples representing the same brand were received, equal portions from several samples were united, and the composite sample was subjected to analysis.

The samples analyzed group themselves as follows: 470 complete fertilizers, furnishing phosphoric acid, potash and nitrogen; 4 dissolved bones, furnishing phosphoric acid and nitrogen; 137 rock-and potash fertilizers, furnishing phosphoric acid and potash; 43 acidulated rock phosphates, furnishing phosphoric acid only; 24 ground bones, furnishing phosphoric acid and nitrogen, and 37 miscellaneous samples, which group includes substances not properly classified under the foregoing heads.

The determinations to which a complete fertilizer is subjected are as follows: (1) Moisture, useful for the comparison of analyses, for indication of dry condition and fitness for drilling, and also of the conditions under which the fertilizer was kept in the warehouse. (2) Phosphoric acid—total and insoluble; that is, that portion not soluble in water nor in warm ammonium citrate solution (a solution supposed to represent the action of plant roots upon the fertilizer), which is assumed to have little immediate food value. By difference, it is easy to compute the so-called "available" phosphoric acid. (3) Potash soluble in water—most of that present in green sand marl and crushed minerals, and even some of that present in vegetable materials such as cotton-seed meal, not being included because insoluble in water even after long boiling. (4) Nitrogen—This element is determined by a method which simply accounts for all present, without distinguishing between the quantities present in the several forms of ammonium salts, nitrates or organic matter. (5) Chlorin—this determination is made to afford a basis for estimating the proportion of the potash that is present as chlorid or muriate, the cheaper source. The computation is made on the assumption that the chlorin present, unless in excess, has been introduced in the form of muriate of potash; but doubtless there are occasional exceptions to this rule. One part

of chlorin combines with 1.326 parts of potash to form the pure muriate; knowing the chlorin, it is, therefore, easy to compute the potash equivalent thereto. (7) In the case of ground bone, the state of sub-division is determined by sifting through accurately made sieves; the cost of preparation and especially the promptness of action of bone in the soil depend very largely on the fineness of its particles, the finer being much more quickly useful to the plant.

The preceding paragraph sets forth the nature of the examinations given to the several classes of fertilizers under the laws in force prior to the present year. The legislation of 1909 has made needful, however, some additional tests. Section 4, of the Act of May 1, 1909, prohibits the sale of "pulverized leather, hair, ground hoof, horns, or wool waste, raw, steamed, roasted, or in any form, as a fertilizer, or as an ingredient of a fertilizer or manure, without an explicit statement of the fact." All nitrogenous fertilizers have, therefore, been submitted to a careful microscopic examination, at the time of preparing the sample for analysis, to detect the presence of the tissues characteristic of the several materials above named. The act of April 23, 1909, makes it unlawful to use the word "bone" in connection with, or as part of the name of any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone. All fertilizers in whose name the word "bone" appears, were therefore examined by microscopic and chemical methods to determine, so far as possible with present knowledge, the nature of the ingredient or ingredients supplying the phosphoric acid. It is a fact, however, well known to fertilizer manufacturers and which should be equally understood by the consumer, that it is, in certain cases, practically impossible to determine the source of the phosphoric acid by an examination of the finished fertilizer. The microscope shows clearly the structure of raw bone, but does not make it possible to discriminate between thoroughly acidulated bone and acidulated rock. The ratio of nitrogen to phosphoric acid in a raw bone—and only such bone as has not been deprived of any considerable proportion of its nitrogenous material by some manufacturing process can properly be called "pure animal bone"—is about 1:8; in cases where the ratio of nitrogen to phosphoric acid exceeds 8, it is clear that part, at least, of the phosphoric acid has been supplied by something else than pure animal bone; but, inasmuch as nitrogen may have been introduced in some material other than bone and no longer detectible by the microscope, the presence of nitrogen and phosphoric acid in the proportions corresponding to those of bone is not proof positive that they have been supplied by bone. Finally, the differences in the iron and silica content of bone and rock respectively, afford means of distinction useful

in some cases; the usefulness of this distinction is limited, however, by the facts that kitchen bone frequently contains earthy impurities rich in iron and silica, and that earthy fillers can legally be used in fertilizers and are in fact considerably used therein both as "make-weights" and as "conditioners," or materials introduced to improve the drilling qualities of the goods. The fact that the phosphoric acid in bone and rock are identical in character is probably so well known as to require no detailed consideration in this connection.

The law having required the manufacturer to guarantee the amount of certain valuable ingredients present in any brand he may put upon the market, chemical analysis is employed to verify the guaranties stamped upon the fertilizer sacks. It has, therefore, been deemed desirable in this report to enter the guaranty filed by the manufacturer in the office of the Secretary of Agriculture, in such connection with the analytical results that the two may be compared. An unfortunate practice has grown up among manufacturers of so wording the guaranty that it seems to declare the presence in the goods of an amount of valuable constituent ranging from a certain minimum to a much higher maximum; thus, "Potash, 2 to 4 per cent." is a guaranty not infrequently given. In reality, the sole guaranty is for 2 per cent. The guaranteed amounts given for each brand in the following tables, are copied from the guaranties filled by the maker of the goods with the Secretary of Agriculture, the lowest figure given for any constituent being considered to be the amount guaranteed. For compactness and because no essentially important fact is suppressed thereby, the guaranties for soluble and reverted phosphoric acid have not been given separately, but are combined into a single guaranty for available phosphoric acid; in cases where the maker's guaranty does not specifically mention available phosphoric acid, the sum of the lowest figures given by him for soluble and reverted phosphoric acid is used. The law of 1879 allowed the maker to express his guaranty for nitrogen either in terms of that element or in terms of the ammonia equivalent thereto; since ammonia is composed of three parts of hydrogen and fourteen parts of nitrogen it is a very simple matter to calculate the amount of one, when the amount of the other is given; the amount of nitrogen multiplied by 1.214 will give the corresponding amount of ammonia, and the amount of ammonia multiplied by 0.824 will give the corresponding amount of nitrogen. In these tables, the expression is in terms of nitrogen. The laws of 1901 and 1909 abolished the alternative and required that the quantity shall be given in terms of nitrogen.

Many manufacturers after complying with the terms of the law, insert additional items in their guaranties, often with the result of misleading or confusing the buyer; the latter will do well to give heed to those items only that are given as the law requires and that are presented in these tables:

A summary of the analyses made this season may be presented as follows:

Summary of Analyses Made this Season.

	Complete fertilizer.	Rock and potash.	Dissolved bone.	Dissolved rock.	Ground bone.
Number of analyses,	470	137	1	43	24
Moisture, per cent.,	9.27	9.34	7.68	9.37	6.15
Phisphoric acid:					
Total, per cent.,	9.51	10.65	12.80	15.88	21.41
Available, per cent.,	8.09	9.73	10.24	14.63	-------
Insoluble, per cent.,	1.42	.92	2.56	1.25	-------
Potash, per cent.,	5.34	4.38	-------	-------	-------
Nitrogen, per cent.,	1.56	-------	1.30	-------	3.25
Mechanical analyses of bone:					
Fine,	-------	-------	-------	-------	55.00
Coarse,	-------	-------	-------	-------	45.00
Commercial valuation,*	27.24	16.26	18.92	14.20	33.26
Average selling price,*	27.64	18.27	20.94	14.69	32.81

*Dollars per ton.

"For the purpose of indicating more specifically to the eye, cases deficient in guarantee, an asterisk has been affixed in the analytical tables where the ingredient has been found less in quantity than the manufacturer guaranteed. Too great emphasis should not be placed upon very slight deficiencies, because very slight imperfections in mixing and slight variations in analysis are practically unavoidable. The asterisk has been used, therefore, only in cases where the deficiencies amount to 0.2 per cent. or more, except where nitrogen has been guaranteed in amounts not higher than 1.0 per cent. in which case an asterisk has been affixed where the deficiency amounts to 0.1 per cent. or more."

The cases of departure of goods from their guaranteed composition observed this season, including only those cases in which it amounted to two-tenths per cent, or more, were as follows:

Summary of Instances of Deficiency from Guaranty.

	Complete fertilizer.	Rock and potash.	Dissolved bone.	Dissolved rock.	Ground bone.
Deficient in four constituents,	1				
Deficient in three constituents,	11	2			
Deficient in two constituents,	48	8		1	
Deficient in one constituent,	123	36	2	4	7
Total number of samples in which deficiencies occur,	83	46	2	5	7

The cases of deficiency noted during the past eleven seasons in the composition of goods as compared with their guaranties, expressed in percentage of the total number of goods of each class analyzed, are as follows:

Percentage of Deficiency 1907-1912.

	Spring, 1907.	Fall, 1907.	Spring, 1908.	Fall, 1908.	Spring, 1909.	Fall, 1909.	Spring, 1910.	Fall, 1910.	Spring, 1911.	Fall, 1911.	Spring, 1912.
Complete fertilizers,	39.4	39.3	40.0	40.0†	39.5	46.3	28.9	35.9	45.1	46.9	39.0
Dissolved bone,	16.6	25.0	‡50.0	16.6	25.0	*	37.5	25.0	16.6	100.00	50.0
Rock and potash,	43.7	49.0	39.0	38.8	36.2	30.4	25.2	37.0	27.1	43.4	33.6
Dissolved rock,	19.5	27.0	21.2	28.5	33.3	19.5	4.3	6.3	5.9	11.9	12.5
Ground bone,	18.5	27.8	38.0	40.0	20.8	38.4	29.17	27.6	47.8	20.0	29.2
All classes except miscellaneous,	36.1	38.9	38.8	38.3	37.6	39.6	26.5	33.5	38.7	46.0	36.0

*Only two samples analyzed for which no guarantees are reported.
†Only three samples analyzed.
‡Only four samples analyzed.

A comparison of the average composition of all samples of complete fertilizers for which guaranties are recorded with the average of the corresponding guaranties, for several seasons past, including those of this season, follows:

Average Composition and Guaranty Compared.

	Average composition. Per cent.	Average guaranty. Per cent.
Spring, 1907.		
Phosphoric acid:		
Total,	9.21	8.50
Available,	8.13	7.83
Potash,	4.55	4.31
Nitrogen,	1.52	1.47
Fall, 1907.		
Phosphoric acid:		
Total,	10.39	9.42
Available,	8.34	8.07
Potash,	3.18	2.72
Nitrogen,	1.39	1.29
Spring, 1908.		
Phosphoric acid:		
Total,	10.07	8.91
Available,	8.29	7.61
Potash,	5.04	4.51
Nitrogen,	1.64	1.59
Fall, 1908.		
Phosphoric acid:		
Total,	10.29	9.31
Available,	8.29	7.96
Potash,	3.24	2.94
Nitrogen,	1.24	1.23
Spring, 1909.		
Phosphoric acid:		
Total,	9.83	8.99
Available,	8.07	7.66
Potash,	5.07	4.89
Nitrogen,	1.67	1.60
Fall, 1909.		
Phosphoric acid:		
Total,	10.13	9.34
Available,	8.27	8.08
Nitrogen,	1.33	1.26
Potash,	3.41	3.12
Spring, 1910.		
Phosphoric acid:		
Total,	9.80	8.80
Available,	8.26	7.62
Potash,	5.20	4.68
Nitrogen,	1.63	1.60
Fall, 1910.		
Phosphoric acid:		
Total,	9.72	8.80
Available,	8.26	7.62
Potash,	5.20	4.68
Nitrogen,	1.63	1.60
Spring, 1911.		
Phosphoric acid:		
Total,	9.86	8.96
Available,	8.31	7.86
Potash,	4.97	4.65
Nitrogen,	1.53	1.54
Fall, 1911.		
Phosphoric acid:		
Total,	9.59	9.09
Available,	8.20	7.87
Potash,	3.63	3.39
Nitrogen,	1.12	1.19

Average Composition and Guaranty Compared—Continued.

	Average composition. Per cent.	Average guaranty. Per cent.
Spring, 1912.		
Phosphoric acid:		
Total,	9.51	8.82
Available,	8.09	7.78
Potash,	5.34	5.05
Nitrogen,	1.56	1.58

It is of interest to note how closely the series of valuations based upon the wholesale price of raw materials in the principal markets during the most important buying season and upon certain average allowances for expenses and profits on the part of the mixer and jobber, coincides with the retail prices later ascertained. A comparison for several seasons past is given below:

Comparison of Selling Price and Valuation, 1907-1912.

	Selling price.	Valuation.	Excess of valuation over selling price.
Complete fertilizers:			
1907, Spring,	24.60	26.84	2.24
Fall,	22.71	24.59	1.88
1908, Spring,	25.69	26.23	.54
Fall,	22.34	23.88	1.54
1909, Spring,	24.88	25.31	.43
Fall,	22.07	22.25	.14
1910, Spring,	25.26	26.63	1.43
Fall,	21.76	22.24	.48
1911, Spring,	24.97	25.95	.98
Fall,	21.73	22.33	.61
1912, Spring,	27.64	27.24	—.40
Dissolved Bone:			
1907, Spring,	22.28	25.08	2.80
Fall,	22.09	27.01	4.92
1908, Spring,	21.11	23.09	1.98
Fall,	22.48	26.05	3.57
1909, Spring,	22.25	21.57	—.68
Fall,	24.50	22.85	—1.65
1910, Spring,	22.17	21.47	—.70
Fall,	25.80	25.70	—.10
1911, Spring,	20.33	23.82	3.49
Fall,	24.88	21.51	—3.37
1912, Spring,	20.94	18.92	2.82

Comparison of Selling Price and Valuation, 1906-1911—Continued

	Selling price.	Valuation.	Excess of valuation over selling price.
Rock and potash:			
1907, Spring,	16.94	16.53	—.41
Fall,	16.58	15.82	—.76
1908, Spring,	16.86	16.24	—.62
Fall,	16.43	16.17	—.26
1909, Spring,	16.98	15.94	1.04
Fall,	16.10	15.50	—.60
1910, Spring,	17.16	16.08	—1.08
Fall,	16.38	16.34	—.04
1911, Spring,	17.05	15.99	—1.06
Fall,	16.25	16.07	—.18
1912, Spring,	18.17	16.26	—1.91
Dissolved rock:			
1907, Spring,	14.04	14.72	.68
Fall,	14.16	14.67	.51
1908, Spring,	14.72	14.92	.20
Fall,	14.31	14.86	.55
1909, Spring,	14.76	13.62	—1.14
Fall,	13.86	14.02	.16
1910, Spring,	14.56	14.00	—.56
Fall,	14.01	14.15	.14
1911, Spring,	15.83	14.26	—1.53
Fall,	14.00	13.78	.22
1912, Spring,	14.69	14.20	—.49
Ground bone:			
1907, Spring,	31.55	29.64	—1.91
Fall,	28.92	28.80	—.12
1908, Spring,	29.04	28.96	—.08
Fall,	28.18	17.99	—1.23
1909, Spring,	30.70	30.28	—.42
Fall,	29.39	28.71	—.68
1910, Spring,	30.19	30.27	.08
Fall,	29.98	31.10	1.12
1911, Spring,	30.93	31.47	.54
Fall,	31.17	31.18	.01
1912, Spring,	32.81	33.26	.45

MATERIALS USED IN FERTILIZERS.

The microscopic examination of the nitrogenous fertilizers for leather, hair, and other materials the use of which without notice is prohibited by the Act of May 1, 1909, revealed in no case such quantity of any of these substances as might not fairly be regarded as an accidental trace. No instance has been reported by the sampling agents in which a declaration of the presence of such material has been made. It is, however, a matter of quite general knowledge that substances of this kind are being largely used in fertilizer mixtures; but, in most cases at least, only after such treatment as results in the

destruction of the characteristic tissues and, at the same time, wholly or partly in that of the organic compounds originally present.

In conformity with the requirements of the Act of April 23, 1909, many firms dropped from the brand names of goods manufactured by them the word "bone" hitherto forming part of said names. Where such change in name appears, it may be taken as evidence that the prosphoric acid is derived, at least in part, from something else than bone.

ORGANIZATION OF THE WORK.

In conclusion, I would state that the work of the season has been performed under my direction, as follows:

The nitrogen determinations by W. Thomas, B. S.; those of total phosphoric acid by H. D. Edmiston; of insoluble phosphoric acid by L. G. Willis, B. S., and P. W. Clemmer, B. S.; of potash by E. S. Erb, M. S.; computations by Miss Ellen Bachman, and chlorin, by Charles Kern; and the preparation of samples, care of records, and the detail of the compilation of this bulletin , by G. C. Given, M. S. To these trained and experienced assistants, my acknowledgments are due for loyal and efficient service.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	THE AMERICAN AGRICULTURAL CHEM. CO., NEW YORK.		
1174	Ammoniated Phosphate and Potash,	Theodore Gerhard, Gilbert,	11.49
281	†Complete Manure with 10% Potash,	D. M. Parkhill, Connellsville,	8.39
66		W. V. Shirk, Oakland Mils,	
1119		Abbot Bros., Sugar Grove,	
787	†High Grade Compound,	Paxton Flour and Feed Co., Bowmansdale.	10.53
556		B. F. Shannon & Co., Butler,	
1113		E. D. Everett Co., Warren,	
1135	†Peerless Vegetable and Grain Grower,	Wysox Produce Co., Wysox,	10.89
786		Paxton Flour and Feed Co., Bowmansdale.	
1390		Billings & Kelder, New Albany,	
189	†Special Potash Mixture,	J. A. Romberger, Elizabethville,	11.08
11		John H. Reed, Cressona, R. D.,	
270	†Superior Compound,	J. A. McCombs, New Salem,	11.15
1026		Dan'l W. Eiler, Schuylkill Haven,	
1829		W. P. Rouse & Son, North East,	
65	†10 Per cent. Potash Mixture for Potatoes	W. V. Shirk, Oakland Mills,	8.69
44		John Artley, Muney,	
183		J. A. Romberger, Elizabethtown,	
1184	†Top Dresser for Grass,	Philip Walters, Millford,	10.84
9		Harry Keefer, Pine Grove, R. D.,	
1667		Greencastle Elevator Co. Greencastle,	
596	†Bradley's Bean and Potato Phosphate,	G. H. Smith, Franklin Forks,	11.89
76		George Iff & Sons, Evans City,	
1196		Levi Berkey, Somerset,	
486	†Bradley's B. D. Sea Fowl Guano,	Eli Yost, McEwensville,	10.65
77		George Iff & Sons, Evans City,	
573		A. Krause & Son, Marwod,	
1862	Bradley's Complete Manure for Potatoes and Vegetables.	J. H. Jones, Hydetown,	7.94
597	†Bradley's Dissolved Phosphate & Potash,	G. H. Smith, Franklin Forks,	12.39
89		Geo. Iff & Sons, Evans City,	
1441	†Bradley's Niagara Phosphate,	Geo. R. Andrews, Enon Valley,	10.59
78		Geo. Iff & Sons, Evans City,	
1510		Schultz & Pardoe, Franklin,	
275	†Canton Chemical, Baker's Special Wheat, Corn and Grass Mixture.	Kings Bros., Uniontown,	12.06
100		F. W. Sonner Hwd. Co., Tremont,	
802		John B. Buckman, Newtown,	
99	Canton Chemical, Baker's Standard High Grade Guano.	F. W. Sonner Hdw. Co., Tremont,	10.67
1078	Canton Chemical, C. C. C. Special Compound.	W. B. Winey, Middleburg,	11.77
1077	†Canton Chemical, Eagle Phosphate,	W. B. Winey, Middleburg,	8.92
1027		Thomas Kramer, Schuylkill Haven,	
1757		F. S. Lewis, Quakertown,	
1945	Canton Chemical, Harrow Brand Crop Guano.	Wm. Gates, Kittanning,	7.30
498	†Canton Chemical, Potato Manure,	F. L. Kahres, Rebuck,	11.02
276		King Bros., Uniontown,	
544		W. J. Schmick & Son, Germansville,	
545	†Canton Chemical, Resurgant Guano,	W. J. Schmick & Son, Germansville,	11.45
184		J. A. Pomberger, Elizabethville,	
803	†Crocker's Ammoniated Superphosphate,	John B. Buckman, Newtown,	10.77
1356		Wm. Grube, Hecla,	
1847		B. D. Moses, Springboro,	
1114	†Crocker's Complete Manure,	E. D. Everett Co., Warren,	11.24
94		W. H. Kaufman, Harmony,	
1581		Farmer's Hdw Co., Shippenville,	

†Composite sample.

FERTILIZERS.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.				
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
8.69	8.00	.87	9.56	9.00	3.38	-------	3.38	2.00	.56	.41	17.05	18.00	1174
7.12	6.00	1.91	9.03	7.00	9.27	-------	*9.27	10.00	*3.03	3.29	35.95	38.00	280
												31.50	66
												35.00	1119
												28.00	787
8.76	8.00	1.44	10.20	9.00	9.94	-------	9.94	10.00	1.62	1.65	31.47	30.00	556
												33.00	1119
*7.62	8.00	1.86	9.48	9.00	5.25	-------	5.25	5.00	1.57	1.65	25.51	25.00	1135
												25.00	783
												27.00	1300
												23.00	189
9.51	9.00	1.45	10.96	10.00	2.00	4.37	*6.37	7.00	.89	.82	26.42	23.00	11
												32.00	270
8.79	8.00	1.29	10.08	9.00	4.52	-------	4.52	4.00	1.74	1.65	26.62	24.00	1025
												24.50	1829
												25.00	65
5.51	5.00	1.31	6.82	6.00	10.50	-------	10.50	10.00	1.46	1.65	27.97	27.50	44
												27.00	183
												35.00	1184
8.77	8.00	.64	9.41	9.00	4.95	-------	4.95	5.00	*4.60	4.94	39.67	40.00	9
												36.00	1667
												25.00	596
8.33	8.00	1.33	9.56	9.00	3.96	-------	3.96	4.00	1.04	.82	22.26	24.00	76
												20.00	1196
												22.00	486
8.16	8.00	1.59	9.75	9.00	2.16	-------	2.16	1.50	2.12	2.06	25.26	25.00	77
												25.00	573
*7.57	8.00	1.70	9.27	9.00	7.86	-------	7.86	7.00	3.27	3.29	35.97	36.00	1862
												23.00	597
8.28	8.00	.84	9.12	9.00	2.28	-------	2.28	2.00	1.10	1.03	20.59	23.00	80
												21.85	1441
8.13	7.00	.47	8.60	8.00	1.88	-------	1.88	1.00	1.05	.82	19.66	21.00	78
												30.00	1510
												22.50	275
8.99	9.00	1.54	10.53	10.00	2.62	-------	2.62	2.00	1.17	.82	22.22	25.00	100
												28.00	802
8.85	8.00	.77	9.62	9.00	3.38	-------	3.38	3.00	2.07	2.06	26.60	30.00	99
9.19	8.00	1.11	10.30	9.00	5.75	-------	*5.75	6.00	*1.86	2.06	28.62	30.00	1078
												18.00	1077
7.35	7.00	1.28	8.63	8.00	1.39	-------	1.39	1.00	.91	.82	18.06	19.00	1027
												20.00	1757
9.20	8.00	1.38	10.58	9.00	1.40	-------	1.40	1.00	.84	.82	19.76	20.00	1945
												24.00	498
8.19	6.00	1.63	9.82	7.00	5.16	-------	5.16	5.00	1.15	1.23	24.03	30.00	276
												22.00	544
												20.00	545
8.14	8.00	1.29	9.43	9.00	4.16	-------	4.16	4.00	.86	.82	21.48	20.00	184
												30.00	803
9.33	9.00	1.28	10.61	10.00	2.33	-------	2.33	2.00	2.37	2.47	27.66	------	1356
												28.00	1847
												24.00	1114
8.11	8.00	1.64	9.75	9.00	3.99	-------	3.99	4.00	.96	.82	21.87	20.00	94
												25.00	1581

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
134	†Crocker's General Crop Fertilizer,	Hall, Kaul & Hyde, St. Marys,	10.72
93		W. H. Kaufman, Harmony,	
1509		H. B. Mitchell & Co., Emlenton,	
135	†Crocker's New Rival Fertilizer,	Hall, Kaul & Hyde, St. Marys,	10.69
1104		Davis Bros., Kane,	
132	†Croker's Potato, Hop and Tobacco Fertilizer.	C. O. Salberg, Ridgway,	10.24
95		W. H. Kaufman, Harmony,	
282		D. M. Parkhill, Connellsville,	
1112	†Crocker's Universal Grain Grower,	E. D. Everett & Co., Warren,	10.21
1582		Farmers' Hdw. Co., Shippensville,	
1106	†Crocker's Wheat and Corn Fertilizer,	Davis Bros., Kane,	9.44
854		Edgar Watters, Jamestown,	
1111		E. D. Everett Co., Warren,	
1560		C. M. Honeywell, Dallas,	
559	†Detrick's Corn and Oats Fertilizer,	B. F. Shannon, Butler,	11.39
1795		F. Horting, Newport,	
558	†Detrick's Imperial Compound,	B. F. Shannon & Co., Butler,	11.70
1195		Levi Berkey, Somerset,	
119	Detrick's Paragon Ammoniated Phosphate and Potash.	J. S. Jobst, Emaus,	9.80
118	Detrick's Quick Step Phosphate for Potatoes and Tobacco.	J. S. Jobst, Emaus,	10.26
705	†Great Eastern General,	F. W. Dutcher, Susquehanna,	10.37
1500		Wm. J. Johnston, Sinking Springs,	
1415	†Great Eastern High Grade Cabbage Grower.	Dennis Dillon, Patton, R. D. 2,	9.63
1391		Ira Hottenstein, Overton,	
1876		S. A. Detrich, Milford,	
1498	Great Eastern Northern Corn Special,	Wm. J. Johnston, Sinking Springs,	13.06
1499	Great Eastern Vegetable Vine and Tobacco Fertilizer.	Wm. J. Johnston, Sinking Springs,	10.29
1303	Lazaretto Ammoniated Phosphate,	Grove & Uffleman, Parke,	11.87
1302	†Lazaretto Special Potato Fertilizer,	Grove & Uffleman, Parke,	8.02
1733		Walker & Walker, Rockwood R. F. D. 2.	
494	Maryland Ammoniated Phosphate,	J. A. Gass, Sunbury,	12.23
784	Maryland O. K. Ammoniated Fertilizer,	Paxton Flour & Feed Co., Bowmansdale.	10.21
1773	†Maryland Special Compound for Potatoes and Tobacco.	T. E. Paxon, Hatboro,	10.65
116		Henry F. Rupp, Breinigsville,	
1830		W. P. Ponse & Son, North East,	
637	†Michigan Carbon Works, General Crop Fertilizer.	J. E. Knerr, Kridersville, R. D. 3,	10.58
1854		Davis & Hyde, Spartansburg,	
1927	Michigan Carbon Works, Red Line Complete Fertilizer.	W. E. Nixon, Mill Hall, R. D. 1,	10.31
858	Milsom's Buffalo Fertilizer,	John T. Crill, Mercer,	10.13
79	†Milsom's Buffalo Guano,	Geo. Iff & Sons, Evans City,	11.72
47		John Artley, Muney,	
846		A. C. Lininger, Greenville,	
1348	Milsom's Corn Fertilizer,	D. R. Stein, Orwigsburg, R. D.,	11.94
661	†Milsom's Wheat, Oats and Barley Fertilizer.	Dufton Hdw. Co., Clearfield,	10.42
867		Edgar C. Gordon, Waynesburg,	
633	Moro-Philips Farmers' Potato Mixture,	Peter Houghenbrach, Nazareth,	8.37
904	†Moro-Philips 10% Potato and Vegetable Manure.	Simon Carl, Numidia,	9.13
1782		S. K. Dunkle, Myerstown, R. No. 5,	
1735	Northwestern Challenge Crop Grower,	Jefferson Altfather, Berlin,	9.63
1465	†Northwestern 10% Potato Fertilizer,	N. R. Yost, Myerstown,	9.88
643		John Kunkel, Bath,	
1517		Clyde D. Duffee, Oil City,	
849	†Northwestern Truck Phosphate,	Greenville Coal & Ice Co., Greenville,	7.71
1516		Clyde D. Duffee, Oil City,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
8.05	7.00	1.89	9.94	8.00	2.73	-------	2.73	1.00	.96	.82	20.66	[24.00 [20.00	134 93
9.89	9.00	1.35	11.24	10.00	3.34	-------	3.34	2.00	1.37	1.23	24.73	[21.00 [-------	1509 135
8.66	8.00	2.11	10.77	9.00	3.02	-------	3.02	3.00	*1.85	2.06	25.72	[27.00 [28.00 [26.00	1104 132 95
9.50	8.00	1.86	11.36	9.00	1.86	-------	1.86	2.00	.86	.82	20.74	[27.00 [23.00 [23.00	282 1112 1582
8.48	8.00	1.60	10.08	9.00	2.14	-------	2.14	1.50	2.19	2.06	26.01	[28.00 [23.00 [28.00	1106 854 1111
9.69	9.00	1.10	10.79	10.00	3.36	-------	3.36	3.00	.86	.82	22.12	[20.00 [23.00 [18.25	1505 559 1795
8.35	8.00	.93	9.28	9.00	2.12	-------	2.12	2.00	.86	.82	19.40	[21.00 [18.00	558 1195
7.54	7.00	1.26	8.80	8.00	1.48	-------	1.48	1.00	.85	.82	18.12	20.00	119
8.70	8.00	.92	9.62	9.00	4.58	-------	4.58	4.00	2.31	2.47	28.89	30.00	118
8.20	8.00	1.21	9.41	9.00	4.41	-------	4.41	4.00	.99	.82	22.39	[22.00 [21.00	705 15
9.70	9.00	.84	10.54	10.00	7.36	-------	7.36	7.00	.91	.82	26.31	[25.00 [25.00 [20.00	1415 1391 1873
9.30	9.00	.99	10.29	10.00	2.19	-------	2.19	2.00	*2.06	2.47	25.96	26.00	1498
8.87	8.00	.88	9.75	9.00	3.36	-------	3.36	3.00	2.34	2.06	27.99	24.00	1490
8.12	8.00	1.44	9.56	9.00	2.18	-------	2.18	2.00	.94	.82	19.94	17.00	1303
8.59	8.00	1.12	9.71	9.00	3.97	-------	3.97	4.00	.74	.82	21.15	[18.50 [21.00	1302 1733
8.26	8.00	1.28	9.54	9.00	3.04	-------	3.04	3.00	*1.26	1.65	22.24	25.00	494
9.00	8.00	.46	9.46	9.00	2.37	-------	2.37	2.00	1.14	.82	21.49	18.00	784
8.71	8.00	1.16	9.87	9.00	9.39	-------	*9.39	10.00	*1.36	1.65	29.58	[32.00 [27.00 [29.00	1773 116 1830
8.53	8.00	1.62	10.15	9.00	4.31	-------	4.31	4.00	.80	.82	21.93	[-------	637
7.16	7.00	1.29	8.45	8.00	1.82	-------	1.82	1.00	.81	.82	17.82	[22.50 20.00	1854 1927
7.88	8.00	1.30	9.18	9.00	1.80	-------	1.80	1.50	2.05	2.06	24.16	24.00	858
8.46	8.00	1.16	9.62	9.00	4.31	-------	4.31	4.00	.84	.82	21.84	[24.00 [21.00 [22.00	79 47 846
9.17	9.00	.89	10.06	10.00	2.85	-------	2.85	2.00	*1.60	2.47	24.37	26.00	1348
8.43	8.00	2.36	10.79	9.00	2.68	-------	2.68	2.00	1.14	.82	22.15	[24.00 [25.00	661 867
6.08	6.00	1.84	7.92	7.00	4.91	-------	4.91	5.00	1.56	1.23	23.30	-------	633
8.61	8.00	.73	9.34	9.00	9.57	-------	*9.57	10.00	1.62	1.65	31.59	[27.00 [23.00	904 1782
8.19	8.00	1.03	9.22	9.00	2.29	-------	2.29	2.00	1.04	1.03	24.41	20.00	1735
8.60	8.00	1.05	9.65	9.00	10.66	-------	10.66	10.00	1.61	1.65	31.83	[27.50 [28.00 [29.00	1465 642 1517
6.29	6.00	2.27	8.56	7.00	4.69	-------	*4.69	5.00	1.24	1.23	22.41	[24.00 [22.00	849 1560

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
1194	†Packer's Union Animal Corn Fertilizer,	S. A. Detrich, Milford,	6.87
1561		H. W. Herdman, Kunkle,	
707	Packer's Union Gardener's Complete Manure.	Mrs. F. A. Whitney, for own use, Susquehanna.	8.59
1562	†Packer's Union Potato Manure,	H. W. Herdman, Kunkle,	12.09
17		Monroe Savidge, Hegins, R. D.,	
1877		S. A. Detrich, Milford,	
485	†Packer's Union Universal Fertilizer,	Eli Yost, McEwensville,	11.08
18		Monroe Savidge, Hegins, R. D.,	
706		Mrs. F. A. Whitney, Susquehanna,	
1883	Quinnipiac B. Fertilizer,	Milton Smith, Milport,	11.16
541	†Quinnipiac Mohawk Fertilizer,	Aaron Schleicher, Slatington, R. D. 2,	9.14
1881		Stewart Bittenbender, Stroudsburg,	
1583	Potato Phosphate,	Farmers' Hwd. Co., Shippensville,	8.79
1607	Read's Leader B. & B. Fertilizer,	O. S. Shambacher, East Point,	8.99
1389	Read's Farmers' Friend Superphosphate,	Billings & Kelder, New Albany,	13.27
938	†Reeses Pilgrim Fertilizer,	Franklin Beck, New Providence,	11.42
1633		J. F. Goodling, Loganville,	
1352	Sharpless & Carpenter Dissolved Fertilizer for Potatoes and General Use.	Jonas Kunkle, New Ringgold, R. D.,	10.18
595	†Sharpless & Carpenter Gilt Edge Potato and Tobacco Manure.	J. C. Harrington, Montrose,	11.87
45		John Artley, Muncy,	
1006		F. F. Houseknecht, Conyngham,	
450	Sharpless & Carpenter No. 2 for Grain and Grass.	L. C. Thompson, Pottsville,	14.12
579	†Sharpless & Carpenter Potato, Corn and Truck Guano.	J. A. Williams, Friendsville,	10.16
451		L. C. Thompson, Pottsville,	
594		J. C. Harrington, Montrose,	
310	†Susquehanna Ammoniated Phospbate,	Caleb Allen, Kelton,	12.73
1232		Henry Sunday, East Berlin,	
312	Susquebanna Animal Phospbate,	Caleb Allen, Kelton,	10.17
247	†Susquebanna Crop Grower,	Z. J. Peters, Gernsey,	9.52
1705		J. Waren Imler, Imler,	
200	†Susquehanna Potato Phosphate,	P. A. Enders, Halifax, R. No. 1,	11.29
311		Caleb Allen, Kelton,	
1047	†Susquehanna Special Potato and Tobacco Manure.	J. C. Meirley, Alexandria,	9.69
248		J. J. Peters, Gurnsey,	
1475		E. S. Erb, Palmyra, R. D. No. 2,	
1752	Allen's Special Brand Potato Manure,	Harvey Detwiler, Chester Springs,	9.27
269	Allen's Special for Wheat and Grass,	J. A. McCombs, New Salem,	6.65
1386	Tygert Allen's Standard Brand Phospbate,	Harvey Detwiler, Chester Springs,	8.41
1750	Tygert Allen's Star Brand Phosphate,	Harvey Detwiler, Chester Springs,	9.18
1751	Tygert Allen's Star Potato Grower,	Harvey Detwiler, Chester Springs,	9.28
91	†Wheeler's Corn Fertilizer,	G. A. Zeigler, Harmony,	11.07
1132		H. N. Shiffler, LeRaysville,	
160	Wheeler's Potato Manure,	C. A. Brader, Bethlehem, R. F. D.,	12.22
159	Wheeler's Special Vegetable Manure,	C. A. Brader, Bethlehem, R. F. D.,	9.89
1167	†Wheeler's Royal Wheat Grower,	Elias Shuman, Catawissa, R. D.,	9.55
1613		Sawyer Bros., Liberty,	
143	†Williams & Clark Good Grower Potato Phosphate.	A. Steen & Co., Elwyn,	9.62
728		Gallup Hdw. Co., Port Allegany,	
144	Williams & Clark Prolific Fertilizer,	J. S. Moore, Oakdale,	6.81
726	†Williams & Clark Royal Phosphate,	Gallup Hdw. Co., Port Allegany,	10.32
1181		J. S. Moore, Oakdale,	
839	†Williams & Clark American Universal Fertilizer.	Philip Walters, Milford,	11.16
114		C. F. Thompson, Beaver Falls,	
1754		Henry F. Rupp, Breinigsville,	
1084	†Zell's Economizer Phosphate,	Jacob Rush, Plumsteadville,	11.46
12		Kinslowe & Ewing, Newton Hamilton	
1797		John H. Reed, Cressona, R. D.,	
		B. F. Horting, Newport,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
9.20	9.00	1.61	10.81	10.00	2.25	-------	2.25	2.00	2.63	2.47	29.24	[30.00	1149
6.92	6.00	.60	7.52	7.00	9.82	-------	9.82	10.00	3.28	3.29	36.78	[26.00	1561
												35.00	700
												[28.75	1562
8.88	8.00	1.03	9.91	9.00	5.95	-------	5.95	6.00	*1.75	2.06	27.98	[30.00	17
												[32.00	1877
8.19	8.00	1.12	9.31	9.00	4.40	-------	4.40	4.00	.98	.82	22.34	[19.00	485
												[22.00	18
												[23.00	706
8.27	8.00	1.25	9.52	9.00	4.04	-------	4.04	4.00	1.02	.82	22.10	-------	1883
7.69	7.00	1.30	8.99	8.00	1.70	-------	1.70	1.00	.91	.82	18.73	[17.00	541
												[------	1881
7.98	8.00	1.63	9.61	9.00	3.33	-------	3.33	3.00	*1.21	2.06	22.20	24.00	1583
7.15	7.00	1.75	8.90	8.00	1.22	-------	1.22	1.00	.76	.82	17.18	19.00	1607
8.11	8.00	1.40	9.51	9.00	2.78	-------	*2.78	3.00	2.14	2.06	26.00	26.00	1389
8.50	8.00	1.02	9.52	9.00	4.48	-------	4.48	4.00	.98	.82	22.71	[19.50	938
												[20.00	1633
8.75	8.00	.85	9.56	9.00	5.99	-------	5.99	6.00	*1.72	2.06	27.56	27.00	1352
												[32.00	595
8.31	8.00	1.44	9.75	9.00	10.22	-------	10.22	10.00	1.49	1.65	30.81	[30.00	45
												[28.50	1006
7.26	7.00	1.38	8.64	8.00	1.31	-------	1.31	1.00	.97	.82	23.84	22.00	450
												[25.00	579
7.14	6.00	1.80	8.94	7.00	5.41	-------	5.41	5.00	1.20	1.23	23.54	[25.00	451
												[26.00	594
8.36	8.00	1.20	9.56	9.00	2.16	-------	2.16	2.00	1.73	1.65	23.67	[21.00	310
												[22.00	1232
9.11	9.00	3.86	12.97	10.00	2.14	-------	2.14	2.00	1.73	1.65	25.62	25.00	312
7.58	7.00	1.08	8.66	8.00	1.91	-------	1.91	1.00	.85	.82	18.48	[18.00	247
												[18.00	1705
9.22	8.00	.36	9.62	9.00	6.48	-------	6.48	5.00	1.74	1.65	28.62	[------	200
												[25.00	311
8.60	8.00	1.24	9.84	9.00	9.97	-------	9.97	10.00	*1.44	1.65	30.54	[32.00	1047
												[28.00	248
												[------	1475
9.26	8.00	.94	10.20	9.00	6.04	-------	6.04	6.00	2.37	2.06	31.40	29.00	1752
*6.63	7.00	2.06	8.69	8.00	1.50	-------	1.50	1.00	1.23	.82	19.40	20.00	269
8.35	8.00	1.44	9.79	9.00	2.37	-------	2.37	2.00	1.60	1.65	23.12	24.00	1383
8.82	8.00	.96	9.78	9.00	3.38	-------	3.38	3.00	2.42	2.06	28.81	26.00	1750
7.19	6.00	1.25	8.44	7.00	5.72	-------	5.72	5.00	1.66	1.23	25.69	24.00	1751
*7.79	8.00	2.22	10.01	9.00	2.47	-------	2.47	2.00	1.58	1.65	23.20	[26.00	91
												[19.50	1132
8.16	8.00	1.31	9.47	9.00	3.34	-------	3.34	3.00	*1.75	2.06	24.58	18.50	160
8.05	8.00	1.53	9.58	9.00	10.36	-------	10.36	10.00	1.67	1.65	31.44	28.00	159
9.09	8.00	1.05	10.14	9.00	2.26	-------	2.26	2.00	.83	.82	20.36	[20.00	1167
												[19.20	1613
6.36	6.00	1.67	8.03	7.00	5.33	-------	5.33	5.00	1.07	1.23	21.94	[23.00	325
												[26.00	143
												[28.00	728
7.19	7.00	2.05	9.24	8.00	1.41	-------	1.41	1.00	.86	.82	18.03	21.00	144
*7.72	8.00	2.21	9.93	9.00	2.46	-------	2.46	2.00	1.11	1.03	20.88	[24.00	726
												[19.00	1181
												[23.75	839
*7.15	8.00	1.54	*8.69	9.00	2.51	-------	2.51	2.00	*1.45	1.65	21.61	[21.00	114
												[22.00	1754
												19.75	1084
8.23	8.00	1.23	9.46	9.00	2.20	-------	2.20	2.00	.98	.82	19.94	[19.00	12
												[17.00	1797

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
261	†Zell's Little Giant,	O. F. Arnold, Dillsburg, R. D.,	10.85
13		John H. Reed, Cressona, R. D.,	
504		W. S. Engle, Dalmatia,	
260	†Zell's Special Compound for Potatoes and Vegetables.	O. F. Arnold, Dillsburg, R. D.,	9.75
539		Chas. H. Kistler, Slatington, R.D.2,	
	AMERICAN FERTILIZER CO., BALTIMORE, MD.		
793	†American Champion Grain Grower,	George Watson, Embreeville,	12.86
955		Lancaster Co. Farmers' Association, Quarryville.	
791	†American Special Compound Guano,	George Watson, Embreeville,	9.82
408		Jonas Eavenson, Christiana,	
1632		H. W. Rehmeyer, Turnpike,	
	AMERICAN REDUCTION CO., PITTSBURG, PA.		
574	†Common Sense,	A. Steinhiser, Marwood,	4.12
267		Weddle & Sutton, West Newton,	
1935		R. W. Rogers, Freeport, R. D.,	
	ARMOUR FERTILIZER WORKS, BALTIMORE, MD.		
871	Armour's Trueker,	Loucks Hardware Co., Scottdale,	9.51
1823	Bone, Blood and Potash,	J. F. Chisholm, McKean,	5.58
448	†Crop Grower,	Seligman & Co., Tamaqua,	9.92
413		Miller & Amon, McDonald,	
603		S. U. Troutman, Bedford, R. D. 2,	
756	†Five Per Cent. Trucker,	Nickles & Stewart, Shippensburg,	8.37
351		H. S. Newcomer, Mt. Joy,	
1200		H. C. Beerits & Sons, Somerset,	
171	†Fruit and Root Crop Special,	M. S. Bachman, Lebanon,	8.41
340		Sol. Brinser, Middletown, R. D.,	
130	†Grain Grower,	C. O. Salberg, Ridgway,	10.76
126		Hibner Hoover Co., DuBois,	
170		M. L. Bachman, Lebanon,	
125	†High Grade Potato,	Hibner Hoover Co., DuBois,	9.54
39		S. G. Updegraff, Williamsport,	
352		H. S. Newcomer, Mt. Joy,	
38	†Royal Ammoniated,	S. G. Updegraff, Williamsport,	10.12
15		Heffner & Luckenbill, Friedensburg,	
411		Miller & Amon, McDonald,	
257	Special Mixture,	Grover C. Myers, Idaville,	7.24
524	†Superior,	A. Skelly, Ebensburg,	10.18
131		C. O. Salberg, Ridgway,	
667		Wm. Wood, Osceola Mills,	
169	†Wheat, Corn and Oats Special,	M. L. Bachman, Lebanon,	6.99
14		Heffner & Luckenbill, Friedensburg,	
353		H. S. Newcomer, Mt. Joy,	
341	†Wheat and Grass Special,	Sol. Brinser, Middletown,	9.33
1734		S. W. Fritz, Garrett,	
	ATLANTIC FERTILIZER CO., BALTIMORE, MD.		
195	Arrow Brand Special,	J. C. Lebo, Millersburg, R. No. 1,	9.87
1290		Geo. H. Holtzinger, Red Lion,	
1300	Gold Medal Superior for All Crops,	Grove & Uffelman, Parke,	6.84
1289	Good Luck Special Potash Manure (1-8-7),	Geo. W. Holtzinger, Red Lion,	7.18
1291	Royal Potato and Tomato Manure,	Geo. W. Holtzinger, Red Lion,	7.12
1301	†XX Special Compound for Potatoes,	Grove & Uffelman, Parke,	9.06
196		J. C. Lebo, Millersburg, R. No. 1,	
1930		S. J. Sider, Blacklick,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed value of commercial 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
7.37	7.00	1.15	8.52	8.00	1.38	-------	1.38	1.00	.98	.82	18.44	[17.00 {17.50 [17.00	261 13 504
9.00	8.00	1.11	10.11	9.00	3.88	-------	3.88	4.00	*2.11	2.47	27.67	[27.00 [27.50	260 539
7.93	8.00	2.08	10.01	9.00	4.14	-------	4.14	4.00	1.00	.82	22.27	[22.00 { [17.00	793 955
7.34	7.00	1.61	8.95	8.00	2.99	-------	2.99	3.00	.78	.41	19.38	[20.00 {17.00 [15.00	791 408 1632
7.80	7.00	.89	8.69	8.00	1.70	-------	1.70	1.00	1.45	1.23	21.14	[20.00 {17.00 [------	574 267 1935
8.95	8.00	.95	9.90	8.50	6.53	.35	6.88	7.00	*3.86	4.11	38.67	42.00	871
10.33	8.00	6.76	17.09	8.50	1.33	6.18	7.51	7.00	*3.87	4.11	44.89	38.00	1823
7.95	8.00	1.39	9.34	8.50	2.54	-------	2.54	2.00	.96	.82	20.12	[23.00 {23.00 [18.00	448 413 603
8.47	8.00	.96	9.43	8.50	6.92	-------	6.92	7.00	*3.68	4.11	37.22	[36.00 {37.00 [35.00	756 351 1200
*5.94	8.00	2.93	8.87	8.50	5.16	-------	5.16	5.00	1.61	1.65	24.42	[24.00 {22.50	171 340
8.31	8.00	1.19	9.50	8.50	2.36	-------	2.36	2.00	1.46	1.65	22.46	[21.00 {25.00 [21.00	130 126 170
7.98	8.00	1.25	9.23	8.50	10.01	-------	10.01	10.00	*1.36	1.65	29.52	[35.00 {32.00 [29.00	125 39 352
8.28	8.00	.64	8.92	8.50	4.21	-------	4.21	4.00	.99	.82	21.97	[24.00 {21.00 [25.00	38 15 411
8.04	8.00	.28	8.32	8.50	1.02	-------	1.02	1.00	.55	.41	15.85	15.00	257
8.35	8.00	.96	9.31	8.50	6.90	-------	6.90	7.00	.89	.82	24.52	[25.00 {26.00 [30.00	524 131 667
7.34	7.00	.50	7.84	7.50	1.30	-------	1.30	1.00	.97	.82	17.80	[18.00 {19.00 [16.00	169 14 353
7.17	7.00	.64	7.81	7.50	5.31	-------	5.31	5.00	.96	.82	21.75	[18.25 [22.00	341 1734
*7.62	8.00	.73	*8.35	9.00	4.34	-------	4.34	4.00	.94	.82	21.28	[18.50 [18.50	195 1290
8.68	8.00	.77	9.45	9.00	3.36	-------	3.36	3.30	1.65	1.65	24.58	20.50	1300
8.82	8.00	.74	9.56	9.00	6.48	-------	*6.48	7.00	1.01	.82	24.93	21.00	1289
7.15	7.00	.82	7.97	8.00	6.21	-------	6.21	5.00	1.63	1.65	25.93	22.00	1291
*6.05	8.00	3.17	9.22	9.00	9.19	-------	*9.19	10.00	*1.41	1.65	27.20	[25.50 {27.00 [30.00	1301 196 1930

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	R. S. AUCKER, SHAMOKIN, PA.		
1070	Grade "B" Bone and Slaughterhouse Phosphate.	Geo. R. Hendrick & Son, Selinsgrove.	8.43
1069	Grade "D" Bone and Slaughterhouse Phosphate.	Geo. R. Hendrick & Son, Selinsgrove.	8.36
1071	High Grade Potash Ammoniated Potato and Truck Phosphate.	Geo. R. Hendrick & Son, Selinsgrove.	10.38
	W. C. BALL, MEDIA, PA.		
330	Ball"s Potato Manure,	W. C. Ball, Media,	10.38
328	Ball's $25 Goods,	W. C. Ball, Media,	10.54
2033	Special Mixture 4-8-10,	W. C. Ball, Media,	
	BALTIMORE FERTILIZER CO., BALTIMORE, MD.		
613	Honest Potato Grower,	Howard Wells, McConnellsburg,	6.76
	BALTIMORE PULVERIZING CO., BALTIMORE, MD.		
1220	Excelsior Compound,	J. D. Gochenour, Dillsburg,	8.06
1221	Practical Fertilizer,	J. D. Gochenour, Dillsburg,	7.91
	J. H. BARTENSCHLAGER, STEWARTSTOWN, PA.		
1312	Bartenschlager's Potato, Tobacco and Vegetable Compound.	J. H. Bartenschlager, Stewartstown,	9.92
	BAUGH & SONS CO., PHILADELPHIA, PA.		
931	†Baugh's Ammoniated Soluble Alkaline,	New Providence Coal Co., New Providence.	7.44
83			
1235		Q. W. Luck, Zelienople,	
		J. W. Ruff, New Oxford,	
1275	Baugb's Animal Base and Potash Compound for all Crops.	Brillinger & Swartz, Emigsvile,	7.37
1569	Baugb's Balanced Plant Food, A Superior Fertilizer for General Use.	E. Floyd Seeley, Nescopeck,	8.83
659	†Baugh's Complete Animal Bone Fertilizer.	Routch & Swartzel, Clearfield,	8.49
586		J. E. Lunch, Friendsville,	
1219		H. Cooke & Co., Dillsburg,	
82	†Baugb's Excelsior Guano,	O. W. Luck, Zelienople,	8.44
30		Flook Bros., Salladasburg,	
188		J. A. Romberger, Elizabethvlle,	
236	†Baugh's General Crop Grower for All Crops.	H. D. & J. F. Bream, Gettysburg,	8.73
185		J. A. Romberger, Elizabethville,	
273		Hogsett & Hawkins, Uniontown,	
1309	†Baugh's Grand Rapids High Grade Guano	James Fulton & Son Co., Stewartstown.	7.08
1874		John Steele, Duncannon, R. No. 4,	
930	Baugh's High Grade Potato Grower,	New Providence Coal Co., New Providence.	9.44
264	Baugh's Peninsula Grain Producer,	H. Cook & Co., Dillsburg,	8.49
582	Baugb's Peruvian Guano (Substitute for Potatoes and all Vegetables.	Ralph Beardslee, Warrenham,	6.67
657	†Baugh's Potato and Truck Special (for all Truck Crops).	Routch & Swartzel, Clearfield,	9.21
583		Ralph Beardslee, Warrenham,	
782		N. F. Reed, New Cumberland,	
274	†Baugh's Special Potato Manure,	Hogsett & Hawkins, Uniontown,	6.24
40		Herman Keebler, Montoursville,	
299		Long & Bunting, Oxford,	
1403	Baugh's Wbeat Fertilizer for Wheat and Grass.	H. G. Wright, Canton,	8.54

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
*7.94	8.23	2.32	*10.26	10.94	4.92	-------	4.92	3.00	1.62	1.08	25.92	26.00	1070
*7.70	8.82	2.22	*9.92	10.54	3.34	-------	3.34	3.60	.94	1.00	21.07	21.00	1069
*8.20	9.00	1.36	*9.56	10.91	4.29	-------	*4.29	4.50	1.21	1.00	23.28	30.00	1071
7.68	‡7.00	1.15	8.83	-------	10.69	-------	10.69	10.00	1.46	1.43	30.34	29.00	330
10.36	‡8.00	1.43	11.79	-------	5.01	-------	5.01	5.00	.98	.82	25.32	24.00	328
8.12	‡8.00	1.35	9.47	-------	9.24	-------	*9.24	10.00	*2.48	3.30	33.92	29.00	2033
6.49	6.00	.79	7.28	7.00	6.73	-------	*6.73	8.00	1.58	1.60	25.50	25.50	613
9.15	8.00	.94	10.09	-------	3.01	-------	*3.01	4.00	1.16	.82	22.50	18.50	1220
9.14	8.00	.84	9.98	-------	2.66	-------	2.66	2.00	.44	.41	16.05	16.00	1221
*7.73	8.00	1.52	9.25	9.00	4.69	-------	*4.69	5.00	1.54	1.65	24.90	23.00	1312
17.84	8.00	1.15	8.99	-------	2.38	-------	2.38	2.00	.63	.41	18.37	16.00 21.00	931 83
8.40	8.00	.52	8.92	-------	2.22	-------	2.22	2.00	1.72	1.65	23.20	15.00 21.00	1235 1275
10.81	10.50	.54	11.35	-------	8.80	-------	8.80	7.00	1.57	1.65	31.72	27.00	1569
8.63	8.00	.77	9.40	-------	4.90	-------	4.90	5.00	1.53	1.65	25.65	24.00 23.00 23.00	659 586 1219
8.35	8.00	1.08	9.43	-------	4.18	-------	4.18	4.00	1.07	.82	22.52	25.00 21.85 20.00	82 30 188
9.58	8.00	.31	9.89	-------	1.38	-------	1.38	1.00	.95	.82	20.10	18.50 18.00 20.00	236 185 273
8.10	8.00	.72	8.82	-------	3.34	-------	3.34	3.00	*2.22	2.47	26.46	25.00 26.30	1309 1874
8.81	8.00	1.32	10.13	-------	9.31	-------	*9.31	10.00	3.38	3.30	39.04	36.00	930
7.94	8.00	.89	8.83	-------	2.21	-------	2.21	2.00	1.22	1.00	20.66	18.50	264
7.26	6.00	.77	8.03	-------	7.04	-------	7.04	7.00	*3.48	4.12	35.38	35.00	582
7.61	7.00	.73	8.34	-------	6.98	-------	6.98	7.00	2.83	2.88	32.65	35.00 31.00 32.00	657 589 783
5.62	5.00	1.58	7.20	-------	10.13	-------	10.13	10.00	*1.41	1.65	27.61	27.00 27.00 27.00	274 40 290
8.17	8.00	1.10	9.27	-------	2.50	-------	2.50	2.00	1.66	1.65	23.32	24.00	1403

*Constituent falls below guaranty. ‡Guaranteed soluble only.

Sample number.	Manufaeturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
344	Baugh's Wrapper Leaf Brand (A Special Manure for Seed Leaf Tobaeeo).	G. Moyer, Mt. Joy,	6.68
1207	Baugh's Export Bone with Potash,	Wm. P. Hay, Somerset, R. F. D. No. 4.	6.24
	THE BERG CO., PHILADELPHIA, PA.		
294	†Berg's High Grade Potato Manure,	B. R. Watson, Oxford,	7.51
213		A. G. Bowman, Palmyra,	
740		J. B. Swigert, Carlisle,	
292	Berg's High Grade Truek Guano,	B. R. Watson, Oxford,	7.37
1765	Berg's S. B. M. Standard Bone Manure,	E. J. Milnor, Hatboro,	7.14
214	†Berg's Tobaeeo Manure,	A. G. Bowman, Palmyra,	6.34
963		A. B. Groff, New Holand,	
	BOWKER FERTILIZER CO., NEW YORK CITY, N. Y.		
419	†Bowker's Corn and Grain Grower,	A. C. MeClure, Burgettstown,	11.87
175		L. G. Landis, Penbrook, R. No. 2,	
514		A. Skelly, Ebensburg,	
1126	†Bowker's Hill and Drill Phosphate,	E. R. Thomas, Springville,	11.39
174		L. G. Landis, Penbrook, R. No. 2,	
1858		Kernoehan & Co., Titusville,	
34	Bowker's Ideal Potash Compound,	A. R. Gilmore, Linden,	11.29
1954	Bowker's Market Garden Fertilizer,	H. S. Stultz, Hollidaysburg,	6.33
203	†Bowker's Potasb Fertilizer,	L. G. Landis, Penbrook, R. No. 2,	9.78
1955		H. L. Stultz, Hollidaysburg,	
1520	†Bowker's Potash or Staple Phosphate,	C. F. Craig, Sligo,	10.69
421		A. C. MeClure, Burgettstown,	
1567		M. M. Harter, Neseopeck,	
176	†Bowker's Potato and Vegetable Fertilizer	L. G. Landis, Penbrook R. No. 2,	12.01
32		A. R. Gilnore, Linden,	
1130		G. A. Crisman, East Rush,	
562	†Bowker's Six Per eent. Potato Fertilizer,	J. G. & W. Campbell, Butler,	8.20
423		A. C. MeClure, Burgettstown,	
697		J. A. Bolt, Great Bend,	
1568	†Stockbridge Special Complete Manure for Corn and all Grain Crop.	M. M. Harter, Neseopeck,	10.03
1609		R. A. DeCoursey, Liberty,	
1125	†Stoekbridge Speeial Complete Manure for Potatoes and Vegetables.	E. R. Thomas, Springville,	8.50
1494		W. H. Gerhart, Reinhold, R. D. 2,	
516	†Bowker's Speeial Crop Grower,	A. Skelly, Ebensburg,	11.01
33		A. R. Gilmore, Linden,	
561		J. G. & W. Campbell, Butler,	
424	†Bowker's Sure Crop Phosphate,	A. C. McClure, Burgettstown,	11.99
204		L. G. Landis, Penbrook, R. No. 2,	
600		A. Bolt, Great Bend,	
	BUFFALO FERTILIZER CO., THE, BUFFALO, N. Y.		
1575	†Fisb Guano,	R. C. Bower, Beaeh Haven,	10.72
1857		H. B. Edwards, Titusville,	
177	Garden Truek,	Russell Byers, Roekville,	10.71
180	Higb Grade Manure,	Armstrong Bowers, Linglestown,	11.37
1611	†Ideal Wheat and Corn,	Snyder Bros., Liberty,	12.65
1553		W. M. Goss, Dallas,	
1696		Harry Shivery, Bellefonte,	
1554	Vegetable and Potato,	Wm. Goss, Dallas,	10.32
	CAMBRIA FERTILIZER CO., JOHNSTOWN, PA.		
519	Corn and Potato Manure,	A. Skelly, Ebensburg,	7.96
518	Standard Phosphate,	A. Skelly, Ebensburg,	6.97

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pound.					Potash in 100 Pounds.				Nitrogen in 100 lbs.				
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
5.50	3.50	2.37	7.87	-------	3.07	1.76	4.83	5.00	3.27	3.30	31.32	28.00	344
7.35	-------	4.74	12.09	11.00	2.85	-------	2.85	2.00	1.76	1.65	25.06	26.00	1207
7.38	7.00	3.58	10.96	-------	8.20	-------	*8.20	10.00	*2.61	3.00	33.85	35.00 ------ ------	213 294 740
6.89	7.00	2.74	9.63	-------	5.44	-------	*5.44	6.00	*4.50	5.00	38.84	45.00	292
*7.73	8.00	2.81	10.54	-------	3.75	-------	*3.75	6.00	*1.60	3.00	24.78	30.00	1765
10.26	8.00	.51	10.77	-------	4.54	-------	*4.54	6.00	*1.70	3.00	27.49	------ 29.00	214 963
8.45	8.00	1.43	9.88	9.00	4.24	-------	4.24	4.00	.86	.82	21.92	25.00 20.50 22.00	419 175 514
9.20	9.00	1.73	10.93	10.00	2.31	-------	2.31	2.00	2.49	2.47	28.38	27.50 27.00 32.00	1126 174 1858
10.55	10.00	1.20	11.75	11.00	6.13	-------	6.13	6.00	1.13	1.23	27.26	28.00	34
6.24	6.00	1.45	7.69	7.00	11.83	-------	11.83	10.00	2.61	2.47	35.41	35.00	1954
6.36	6.00	1.48	7.84	7.00	2.46	-------	2.46	2.00	.84	.82	17.97	18.00 18.00	203 1955
8.87	8.00	1.76	10.63	9.00	3.96	-------	3.96	3.00	.86	.82	22.23	24.00 26.00 23.00	1520 421 1567
8.54	8.00	1.03	9.57	9.00	4.10	-------	4.10	4.00	*2.15	2.47	27.57	30.00 30.00 34.00	170 32 1130
7.14	6.00	1.49	8.63	7.00	6.11	-------	6.11	6.00	.87	.82	22.52	25.00 28.00 26.00	562 423 697
10.39	10.00	.85	11.24	11.00	6.73	-------	*6.73	7.00	*3.06	3.29	36.21	36.00 36.00	1568 1609
6.31	6.00	1.47	7.78	7.00	9.75	-------	*9.75	10.00	3.28	3.29	36.52	35.00 ------	1125 1494
8.36	8.00	1.48	9.84	9.00	9.89	-------	9.89	10.00	1.51	1.65	30.58	30.00 32.00 35.00	516 33 561
9.11	9.00	1.55	10.66	10.00	2.29	-------	2.29	2.00	.76	.82	20.20	25.50 20.00 25.00	424 204 600
9.10	9.00	1.99	11.09	10.00	2.51	-------	2.51	2.00	1.10	.80	22.22	18.00 22.00	1575 1857
7.86	8.00	1.66	9.52	9.00	7.90	-------	7.90	7.00	3.52	3.30	37.22	30.00	177
7.51	7.00	1.99	9.50	8.00	10.38	-------	10.38	10.00	3.24	3.30	38.42	-------	180
9.20	9.00	1.38	10.58	10.00	5.14	-------	5.14	5.00	1.74	1.60	27.69	23.50 25.00 ------	1611 1553 1693
*7.71	8.00	1.58	9.29	9.00	8.07	-------	8.07	7.00	2.40	2.40	32.07	25.00	1554
7.66	6.00	1.86	9.52	7.00	8.29	-------	8.29	8.00	1.61	1.50	28.86	30.00	519
6.35	6.00	2.47	8.82	7.00	4.47	-------	4.47	3.00	1.56	1.50	23.90	24.00	518

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	CENTRAL CHEMICAL CO., THE, HAGERSTOWN, MD.		
1674	Empire,	Sollenberger & Croft, Fayetteville,	7.32
	CHESAPEAKE CHEMICAL CO., THE, BALTIMORE, MD.		
928	C. C. Co.'s Imperial Guano,	New Providence Coal Co., New Providence.	7.36
1904		Rishel & Kreamer, Jerseytown,	
927	C. C. Co.'s Triumph Guano,	New Providence Coal Co., New Providence.	8.76
	COE-MORTIMER CO., THE, NEW YORK, N. Y.		
2034	Peruvian Vegetable Grower,	G. W. Scott Co., Pittsburg,	10.18
894	E. Frank Coe's Gold Brand Excelsior Guano.	Bottlinger & Scott, Danville,	11.82
	COLUMBIA GUANO CO., BALTIMORE, MD.		
1504	Columbia Fish, Phosphate and Potash,	L. A. Geiger, Joanna,	7.39
717	Truck and Garden Manure,	E. M. Tingley, Kingsley,	7.27
1503	Columbia General Crop Manure,	L. A. Geiger, Joanna,	6.33
716	Columbia Special Potato Formula,	E. M. Tingley, Kingsley,	9.20
1432	†Columbia Special Potato Guano,	A. George & Son, Homer City,	2.54
1502		L. A. Geiger, Joanna,	
	JOSIAH COPE & CO., BALTIMORE, MD.		
1365	†Cope's Ammoniated Phosphate,	Harry Wilson, Frazer,	10.14
1724		J. H. Hershberger, Everett,	
404	†Cope's Potato and Tobacco Phosphate,	Jonas Eavenson, Christiana,	12.12
317		Josiah Cope & Co. (from car), Baltimore, Md.	
1040		J. C. Henderson, Petersburg,	
1920	Cope's Pure Bone Phosphate,	Henry E. Warner, Pennsdale,	9.34
316	Cope's Try Me Fertilizer,	Josiah Cope & Co. (from car), Baltimore, Md.	11.23
1041	†Cope's Universal Mixture for all Crops,	J. C. Henderson, Petersburg,	10.26
403		Jonas Eavenson, Christiana,	
1066		O. H. Kustenbader, Milton,	
	JAMES G. DOWNWARD CO., COATESVILLE, PA.		
835	All Crops Fertilizer,	Jas. G. Downward, Coatesville,	8.56
1764	Ammoniated Phosphate,	E. J. Milnor, Hatboro,	8.45
814	Corn, Wheat and Grass Special,	Mary C. Hibbs, Hulmeville,	11.81
1763	Special Potato Fertilizer,	E. J. Milnor, Hatboro,	8.63
	AMOS EBY & CO., LEAMAN PLACE, PA.		
923	Pequea Ammoniated,	Harvey S. Eby, Refton,	11.39
926	Pequea Economy,	Harvey S. Eby, Refton,	10.78
922	Pequea Valley Fertilizer,	Harvey S. Eby, Refton,	8.88
	EUREKA FERTILIZER CO., THE, BALTIMORE, MD.		
522	†Complete Compound,	A. Skelly, Ebensburg,	9.33
1097		S. A. Hostetler, Belleville,	
452	†Corn and Potato Special,	Raymond Wagner, Snedburg,	11.05
43		D. J. Shock, Montoursville,	
616		A. N. Witter, Waterfall,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.				
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
*7.54	8.00	.62	*8.16	9.00	9.34	-------	*9.34	10.00	*1.45	1.65	28.54	27.00	1674
8.82	8.00	1.29	10.11	9.00	2.83	-------	2.83	2.00	.51	.41	16.39	15.50	928
												15.00	1904
8.30	8.00	1.10	9.40	9.00	10.42	-------	10.42	10.00	1.83	1.64	32.49	28.00	927
7.94	8.00	1.52	9.46	9.00	1.20	8.46	9.66	9.00	3.14	3.30	39.34	-------	2034
7.90	8.00	2.17	10.07	9.00	6.07	-------	6.07	6.00	2.52	2.47	31.06	30.00	894
7.81	8.00	1.31	9.12	8.50	3.19	-------	3.19	3.00	1.67	1.65	23.77	20.00	1504
*7.04	8.00	2.83	9.87	8.50	7.99	-------	7.99	7.00	3.56	3.29	37.30	29.00	717
7.75	8.00	.88	8.63	8.50	4.26	-------	4.26	4.00	.73	.82	20.49	19.00	1503
*7.55	8.00	1.84	9.39	8.50	9.81	-------	9.81	10.00	1.54	1.65	30.06	24.75	716
5.36	5.00	1.12	6.48	5.50	10.08	-------	10.08	10.00	1.71	1.65	28.45	28.00	1432
												23.00	1502
8.06	8.00	1.72	9.78	9.00	3.31	-------	3.31	3.00	.86	.82	20.72	22.00	1365
												23.00	1724
10.71	10.00	1.15	11.86	11.00	6.19	-------	*6.19	7.00	.92	.82	26.30	26.00	404
												22.00	317
												23.50	1040
10.94	9.00	3.02	13.96	13.50	4.47	-------	4.47	4.00	1.87	1.85	29.78	24.00	1920
8.73	8.00	1.11	9.84	9.00	4.13	-------	4.13	4.00	1.66	1.65	25.62	22.00	316
8.12	8.00	1.07	9.19	9.00	8.45	-------	*8.45	10.00	.43	-------	23.89	-------	1041
												21.00	403
												24.00	1066
6.96	7.00	.97	7.93	8.00	4.48	-------	4.48	3.00	.46	.41	18.60	22.00	835
8.03	7.00	.97	9.00	8.00	3.84	-------	3.84	3.50	1.11	.82	22.00	25.00	1764
7.72	7.00	1.13	8.85	-------	4.20	-------	4.20	3.50	1.47	1.65	23.71	29.00	814
7.87	7.00	.75	8.62	8.00	5.59	-------	5.59	5.00	1.16	1.24	23.72	29.00	1763
10.56	10.00	2.07	12.63	12.00	2.91	-------	2.91	2.00	1.03	.82	23.92	20.00	923
8.99	9.00	2.87	11.86	11.00	3.24	-------	3.24	2.50	1.87	1.65	26.92	24.00	926
8.60	8.00	2.13	10.73	9.00	9.43	-------	*9.43	10.00	1.74	1.65	31.82	28.00	922
7.75	7.00	2.28	10.03	8.00	5.22	-------	5.22	5.00	.80	.82	22.36	22.00	522
												21.50	1097
												19.90	452
*8.10	9.00	1.59	9.69	-------	3.50	-------	3.50	3.00	.76	.82	20.43	21.00	43
												22.00	616

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
68	†Fish and Potash,	L. Arnold, Pfouts Valley,	10.79
453		Raymond Wagner, Snedburg,	
862	†Grain and Grass Mixture,	Wm. Davis, Jr., Greensboro,	10.21
774		D. J. Beitzel, Mechanicsburg, R. D.,	
1059		L. Arnold, Pfouts Valley,	
193	†High Grade Trucker,	L. Arnold, Liverpool,	9.37
178		Armstrong Bowers, Linglestown,	
906		W. F. Slagle, Bloomsburg,	
1311	Imperial Phosphate,	J. H. Bertenslager, Stewartstown,	9.86
179	†Potato and Vegetable Fertilizer,	Armstrong Bowers, Linglestown,	10.12
773		D. J. Beitzle, Mechanicsburg,	
	FARMERS' FERTILIZER WORKS, ELZIABETHTOWN, PA.		
190	†Grain and Grass Special,	John Sheets, Elizabethville,	9.12
361		W. F. Groff, Lititz,	
1072	†Potato, Tobacco and Truck Manure,	I. L. Luck, Selinsgrove,	8.94
348		H. S. Newcomer, Mt. Joy,	
1800		B. F. Horting, Newport,	
354	Pride of Donegal,	H. S. Newcomer, Mt. Joy,	8.05
349	Special Potato and Tobacco Manure,	H. S. Newcomer, Mt. Joy,	9.26
	W. S. FARMER & CO., BALTIMORE, MD.		
1308	W. S. Farmer & Co.'s Pelican Guano,	D. J. Trout, Stewartstown,	8.92
	GRIFFITH & BOYD CO., BALTIMORE, MD.		
238	Cereal Plant Food,	H. J. Van Dyke, Gettysburg, R. D. No. 6.	7.69
358	†Double Strength Tobacco Grower,	Bear & Long, Lititz,	7.55
1924		S. A. Glosser, Linden,	
60	†Farmer's Improved Phosphate,	B. F. Gayman, Thompsontown,	9.31
1274		G. H. Wolf's Sons, Mt. Wolf,	
85	†Farmer's Potato Manure,	Harmony Cereal Mills, Harmony,	10.36
36		S. A. Glosser, Linden,	
300		Passmore & Co., Nottingham,	
731	†Gilt Edge Crop Guano,	Wm. H. Beckert, Bakerstown,	8.99
359		Bear & Long, Lititz,	
901		E. D. Tewksbury, Catawissa, R. D. 5	
	FRANK HARTRANFT, COATESVILLE, PA.		
821	Potato Phosphate,	Preston Powell, West Grove,	11.12
822	Special Phosphate,	Preston Powell, West Grove,	10.97
	W. D. HASTINGS & SON, ATGLEN, PA.		
313	Atglen Brand,	W. S. Hastings & Son, Atglen,	6.56
	S. M. HESS & BRO., INC., PHILADELPHIA, PA.		
680	Jumbo Complete Formula,	J. R. Iddings, Mifflinburg, R. F. D.,	10.92
31	†Keystone Phosphate,	Wm. Bardo, Larrysville,	12.25
24		Jacob Kimmel, Valley View,	
59		W. W. Book, Port Royal,	
117	Potato and Truck Manure,	J. T. Masey, Allentown,	10.56
482	†Special Compound,	H. E. Shipman, Hughesville, R. D. 3	11.91
379		Benj. Weidener, Lititz, R. D. 2,	
1171		W. J. Newhart, Saylorsburg, R.F.D.1	
378	†Special Corn Manure,	Benj. Weidner, Lititz,	12.05
109		H. F. Troxell, Allentown, R. D. 4,	
481		H. E. Shipman, Hughesville,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pound.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
9.70	8.00	1.90	11.60	9.00	1.06	-------	1.06	1.00	.50	.41	18.56	20.00	68
												18.00	459
												------	862
8.38	8.00	2.07	10.45	9.00	2.44	-------	2.44	2.00	1.00	.82	21.01	19.00	774
												17.00	1059
												------	193
8.56	8.00	1.93	10.49	-------	9.69	-------	*9.69	10.00	1.58	1.65	31.23	------	178
												35.00	905
8.11	8.00	1.76	9.87	9.00	2.53	-------	2.53	1.00	.80	.82	19.76	17.00	1311
9.67	8.00	.84	10.51	9.00	4.93	-------	4.93	4.00	*1.38	1.65	26.08	------	179
												24.00	773
*7.38	8.00	1.28	8.66	-------	4.38	-------	4.38	4.00	.83	.82	20.89	20.00	190
												20.00	361
												------	1072
9.86	10.00	.85	10.71	-------	5.33	.99	6.32	6.00	2.30	2.47	32.01	26.50	348
												28.00	1800
8.05	7.00	1.40	9.45	-------	4.27	1.53	5.80	5.00	1.86	1.65	28.00	22.50	354
6.82	6.00	.96	7.78	-------	4.27	3.17	*7.44	10.00	*2.16	2.47	29.95	30.00	349
6.44	6.00	.71	7.15	7.00	2.61	-------	*2.61	3.00	.81	.41	17.61	17.00	1308
7.95	8.00	2.31	10.26	9.00	2.38	-------	2.38	2.50	.82	.85	19.23	21.00	238
8.51	8.00	2.68	11.19	9.00	2.41	-------	*2.41	3.00	*2.26	2.50	27.08	27.00	358
												28.00	1924
7.41	7.00	2.66	10.07	8.00	2.34	-------	2.34	2.00	*.74	.85	19.04	------	60
												18.65	1274
												27.00	85
9.74	8.00	.80	10.54	9.00	8.10	-------	*8.10	9.00	.81	.85	26.65	------	35
												25.00	300
												29.00	731
7.94	8.00	2.45	10.39	9.00	8.80	-------	*8.80	10.00	1.61	1.65	29.96	30.00	359
												20.00	901
8.25	8.00	.74	*8.99	10.00	6.96	-------	*6.96	8.00	.93	.82	24.60	27.00	821
*7.94	10.00	1.75	*9.69	11.00	2.65	-------	2.65	2.00	*.63	.82	19.02	21.00	822
*5.52	8.00	4.56	10.08	-------	5.46	-------	5.46	5.00	1.54	1.65	24.87	23.00	313
7.44	7.00	1.08	8.52	8.00	2.37	-------	2.37	1.00	1.14	.82	20.68	-------	680
8.67	8.00	1.08	9.75	9.00	1.36	-------	1.36	1.00	.96	.82	19.46	------	31
												22.00	24
												22.00	59
8.02	8.00	1.57	9.59	9.00	6.42	-------	6.42	6.00	*2.14	2.47	29.68	32.50	117
												19.50	482
8.07	8.00	1.06	9.13	9.00	4.56	-------	4.56	4.00	1.14	.82	23.06	24.00	379
												23.00	1171
												21.00	378
8.36	8.00	1.93	9.29	9.00	2.40	-------	2.40	2.00	.93	.82	20.64	21.50	109
												18.00	481

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
377	†Superior Potash Mixture,	Benj. Weidener, Lititz,	9.57
1821		J. D. Cooper, Landisburg,	
	HUBBARD FERTILIZER CO., THE, BALTIMORE, MD.		
221	†Hubbard's Climax Phosphate,	J. B. Spera, Dillsburg,	6.65
182		J. A. Romberger, Elizabethville,	
483		J. P. Hill, Muney, R. D. 1,	
220	†Hubbard's Columbia Jem Phosphate,	I. B. Spera, Dillsburg,	7.86
187		J. A. Romberger, Elizabethville,	
499		E. J. Otto, Red Cross,	
536	†Hubbard's Farmer's I. X. L.,	Wesley Seltzer, Orwigsburg,	7.79
500		E. J. Otto, Red Cross,	
990		J. A. Umble & Bro., Bird-in-Hand,	
863	†Hubbard's Jersey Trucker,	T. M. Smith, Jefferson,	9.17
501		E. J. Otto, Red Cross,	
988	†Hubbard's Jewel Phosphate,	J. A. Umble & Bro., Bird-in-Hand,	6.29
989		J. A. Umble & Bro., Bird-in-Hand,	
1551		J. I. Thompson, Lemont,	
	M. P. HUBBARD & CO., BALTIMORE, MD.		
1297	Hubbard's Celebrated Phosphate for General Use.	Geo. B. Murphy, Red Lion, R. D. 1,	6.29
1298	†Exeelsior Phosphate,	Geo. B. Murphy, Red Lion, R. D. 1,	10.97
1628		J. P. Suchart, New Freedom,	
243	Hubbard's Farmer's Aeme,	Biglerville Warehouse Co., Biglerville	8.52
	INTERNATIONAL SEED CO., Roehester, N. Y.		
1842	A. I. Speeial Manure,	F. H. Fowler, Linesville,	12.18
1122	International Potato and Truek Manure,	D. Fulkerson, Sugar Grove,	13.38
	JARECKI CHEMICAL CO., SANDUSKY, OHIO.		
1512	†Fish Phosphate and Potash, Tobacco and Potato Food.	Clark Eros., Oil City,	9.66
1445		R. S. Rommel, Enon Valley, R. D.,	
1837		David Garloeh, North Girard,	
1218	†Lake Erie Guano with Phosphate and Potash.	S. S. Mosbolder, Rockwood, R. F. D. 3.	7.55
1456		G. H. Cornell, Edinboro,	
415	Number One Formula,	J. M. Raab & Bro., Midway,	10.53
1454	Tobacco and Truck Grower,	G. H. Cornell, Edinboro,	9.76
	KEYSTONE BONE FERTILIZER CO., PHILADELPHIA, PA.		
1755	Keystone Corn and Cereal Grower,	Wm. M. Holbert, Warrington,	9.04
1650	Keystone Economy Potash Compound,	L. A. Gleger, Joanna,	9.88
1161	†Keystone Standard Potato Manure,	J. E. Houek, Catawissa, R. D.,	11.44
1769		W. S. Buekman, Hatboro,	
1355	†Keystone 20th Century Speeial,	Henry Rinehart, New Ringgold, R. D.	8.71
1658		N. E. Dietrick, Reading,	
638	†Keystone Vegetable Guano,	W. O. Minieh, Cherryville,	10.32
447		A. C. Oswald, Coplay, R. D.,	
1651		L. A. Geiger, Joanna,	
	LANCASTER BONE FERTILIZER CO., LANCASTER, PA.		
604	Complete Am. Bone Manure,	Daniel Replogle, Woodbury,	8.02
673	†Potato, Fruit and Vegetable,	J. W. Garman, Riehfield,	5.72
507		Wm. B. Rowland, Ebensburg, R.D.2	
1012		Frank Knorr, Conyngham,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
8.68	8.00	.84	9.52	9.00	9.90	-------	9.90	10.00	*1.40	1.65	30.18	30.00	377
												29.00	1821
												19.00	221
*6.54	7.00	1.66	8.20	8.00	4.84	-------	4.84	4.00	.85	.82	20.70	19.00	182
												18.00	483
												16.00	220
9.63	8.00	1.91	10.54	9.00	2.58	-------	2.58	2.00	.45	.41	16.74	16.00	187
												17.00	499
												19.50	536
8.45	8.00	1.81	10.26	9.00	2.37	-------	2.37	2.00	1.61	1.64	23.58	21.00	500
												22.00	990
												31.00	863
8.99	8.00	1.34	10.33	9.00	8.06	-------	*8.06	10.00	1.60	1.64	29.73	28.00	501
												27.00	983
*7.56	8.00	1.43	8.99	9.00	6.13	-------	6.13	5.00	1.14	1.00	24.32	22.00	989
												------	1551
8.24	8.00	.57	*8.81	9.50	2.46	-------	2.46	2.00	2.12	1.66	25.15	20.00	1297
8.96	8.00	.69	9.65	9.50	2.62	-------	2.62	2.00	.99	.83	21.08	17.00	1298
												17.00	1623
8.72	8.00	.55	*9.27	9.50	4.22	-------	4.22	4.00	.96	.83	22.16	21.00	243
6.06	6.00	.66	*6.72	7.00	10.86	-------	10.86	10.00	2.43	2.47	33.12	33.40	1842
8.06	8.00	.82	8.88	9.00	7.00	-------	7.00	7.00	1.45	1.23	26.80	29.00	1122
												26.00	1512
8.35	8.00	.73	9.08	9.00	3.91	-------	3.91	4.00	.82	.83	20.91	22.00	1445
												24.00	1837
*7.80	8.00	1.57	9.37	9.00	2.38	-------	2.38	2.50	1.20	1.25	21.04	21.00	1218
												23.00	1456
8.40	8.00	1.36	9.76	9.00	1.81	-------	1.81	2.00	.88	.83	19.56	22.00	415
*5.64	6.00	.96	*6.60	7.00	6.23	-------	6.33	6.00	1.60	1.66	24.28	27.00	1454
*7.33	8.00	1.04	*8.37	9.00	4.69	-------	4.69	4.00	1.70	1.65	24.91	27.00	1755
7.39	7.00	.64	8.03	8.00	5.97	-------	5.97	5.00	.73	.82	21.75	21.00	1650
7.49	6.00	.48	7.97	7.00	9.71	-------	*9.71	10.00	2.76	2.47	34.74	29.50	1161
												31.00	1769
6.59	5.00	.65	7.24	6.00	12.18	-------	12.18	10.00	1.10	1.23	28.90	24.00	1355
												26.00	1658
												26.00	638
7.78	6.00	.60	8.38	7.00	7.36	-------	7.36	6.00	1.63	1.65	27.67	------	447
												25.00	1651
8.14	8.00	.78	8.92	9.00	2.42	-------	2.42	2.00	.80	.82	19.20	21.00	604
7.27	7.00	.32	*7.59	8.00	7.60	-------	7.60	7.00	*.55	.82	22.20	23.00	673
												24.00	597
												24.00	1012

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
508	†Potato, Tobacco and Truck Manure,	Wm. R. Rowland, Ebensburg, R. D. 2.	8.84
1776		Aaron Vogt, Lebanon, R. No. 1,	
898	†Special Guano,	H. E. Bahner, Catawissa, R. D. 5,	7.96
1288		Josiah Flinchbaugh, Windsor,	
	LANCASTER CHEMICAL CO., THE, LANCASTER, PA.		
51	No. 1 Tobacco and Vegetable,	C. S. Winey, McAllisterville,	7.34
1000		H. C. Breekbill, Strasburg,	
968	No. 2 Dewey Brand,	I. B. Myer, Leola,	6.22
969	No. 4 Rising Sun Animal Bone,	I. B. Myer, Leola,	8.59
999	No. 6 Hard Times Fertilizer,	H. C. Breekbill, Strasburg,	8.33
49	†No. 11 Keystone Brand,	C. S. Winey, McAllisterville,	9.89
173		M. H. Witmeyer, Lebanon,	
	LEBANON FERTILIZER WORKS, LEBANON, PA.		
1342	†Levan's Lebanon Special Fertilizer,	Frank Gerhart, Orwigsburg,	8.31
1787		J. M. Groh, Lickdale,	
215	Levan's Special Potato and Tobacco,	A. B. Bomgardner, Palmyra,	7.54
1341	†Levan's Special Truck Fertilizer,	Frank Gerhart, Orwigsburg,	7.16
2		Horace Kintzel, Pine Grove, R. D.,	
1786		J. M. Groh, Lickdale,	
172	†Levan's Wheat and Grass Fertilizer,	M. L. Baehman, Lebanon,	6.38
1477		D. C. Ney, Jonestown,	
342	Levan's Wheat and Grass Special Fertilizer,	Sol Brinser, Middletown, R. D.,	8.54
	LISTER AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.		
1362	Lister's Corn No. 2 Fertilizer,	D. W. Kleckner, New Ringgold, R. D.	9.33
876	†Lister's G. Brand,	D. W. Bartz, Greensburg,	10.86
372		Levi Tirgler, Lititz, R. D. 2,	
1144		N. J. Norton, New Albany,	
736	†Lister's Harvest Queen Phosphate,	R. M. Bowser & Son, Renfrew,	11.34
496		A. J. Smith, Paxinos, R. D.,	
752		Allison & Foglesonger, Shippensburg,	
914	†Lister's New York Special Fertilizer,	B. F. Walters, Christiana,	10.91
738		R. M. Bowers & Son, Renfrew,	
1049		H. P. Harpster, Warriors Mark,	
1099	†Lister's Potato and Corn No. 2 Fertilizer,	J. M. Zook, Belleville,	11.65
371		Levi Tirgler, Lititz, R. D. 2,	
1450		P. C. Harned, Edinboro,	
812	†Lister's Potato Manure,	W. E. Ervin, Somerton,	12.19
375		Levi Tirgler, Lititz, R. D. 2,	
878		D. W. Bartz, Greensburg,	
1004	Lister's Potato No. 2 Fertilizer,	Ed. Hilliard, Conyngham,	12.09
751	†Lister's Special Crop Producer,	Allison & Foglesonger, Shippensburg,	9.05
611		D. B. Griffith, Wolfsburg, R. D.,	
879		D. W. Bartz, Greensburg,	
370	†Lister's Special 10% Potato Fertilizer,	Levi Tirgler, Lititz, R. D. 2,	10.92
336		W. E. Erwin, Somerton,	
708		C. H. Van Gorder, Gibson,	
373	Lister's Special Tobacco Fertilizer,	Levi Tirgler, Lititz, R. D. 2,	9.81
1149	†Lister's Success Fertilizer,	Zehner Bros., Bloomsburg,	7.74
1836		R. S. Carter, Harbor Creek,	
565	†Lister's 3-6-10 for Potatoes,	Morow & Buxton, Valencia,	9.37
376		Levi Tirgler, Lititz, R. D. 2,	
771		Miller & Enrich, Mechaniesburg,	
567	†Lister's U. S. Superphosphate,	Morrow & Buxton, Valencia,	10.79
497		Daniel Lahr, Dornsife,	
1075		G. N. Erdley, Selinsgrove,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.				
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Sulphate.	Found.	Guaranteed.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
9.04	8.00	.56	9.60	9.00	7.81	-------	7.81	8.00	1.73	1.65	29.83	29.00	508
												28.00	1776
6.83	7.00	1.84	8.67	8.00	4.11	-------	4.11	4.00	1.02	.82	21.02	20.00	898
												21.00	1288
*5.99	7.50	2.55	8.54	8.50	1.70	6.25	7.95	7.00	2.19	2.06	31.39	29.70	51
												31.00	1000
*7.42	8.00	1.95	9.37	9.00	2.00	1.92	3.92	4.00	1.31	1.23	23.24	22.50	968
*8.35	10.00	2.44	*10.79	11.00	2.26	-------	2.26	2.00	2.44	2.47	27.63	26.50	969
*7.00	8.00	1.99	8.99	9.00	2.02	-------	2.02	2.00	.61	.41	17.28	18.00	999
6.84	7.00	1.99	8.83	8.00	2.19	-------	2.19	1.00	*.71	.82	17.78	17.50	49
												-------	173
*7.23	8.00	1.53	*8.76	9.00	3.07	-------	3.07	2.00	*1.84	2.06	24.06	18.75	1342
												21.00	1787
*7.77	8.00	1.42	9.19	9.00	5.66	-------	*5.66	6.00	1.82	1.65	27.00	24.00	215
7.42	7.00	.66	8.08	8.00	9.91	-------	9.91	10.00	1.74	1.65	30.39	24.50	1341
												25.00	2
												27.00	1786
*6.83	8.00	1.66	*8.49	9.00	5.18	-------	5.18	5.00	.94	.82	21.81	20.00	172
												20.00	1477
7.87	8.00	1.56	9.43	9.00	2.09	-------	2.09	1.50	1.27	1.23	21.06	19.00	342
10.21	10.00	2.09	12.30	11.00	4.52	-------	4.52	4.00	1.53	1.65	27.48	24.00	1362
*7.69	8.00	1.62	9.31	9.00	4.17	-------	4.17	4.00	1.07	.82	22.05	28.00	876
												21.00	372
												25.00	1144
9.02	9.00	1.75	10.77	10.00	2.38	-------	2.38	2.00	1.24	1.23	22.57	25.00	736
												21.00	493
												21.00	752
7.99	8.00	1.14	9.13	9.00	10.60	-------	10.60	10.00	.99	.82	28.48	23.50	914
												29.00	733
												27.50	1049
10.39	10.00	1.77	12.16	11.00	4.44	-------	4.44	4.00	1.56	1.65	27.45	24.50	1009
												25.00	371
												27.00	1450
7.97	8.00	2.08	10.05	9.00	7.05	-------	7.05	7.00	3.32	3.29	35.76	33.00	812
												34.00	375
												45.00	878
10.16	10.00	1.80	11.96	11.00	4.19	-------	4.19	4.00	1.52	1.65	33.92	-------	1004
7.15	7.00	1.28	8.43	8.00	1.21	-------	1.21	1.00	1.09	.82	18.58	17.50	751
												18.00	611
												28.00	879
7.95	8.00	2.32	10.27	9.00	10.92	-------	10.92	10.00	*1.39	1.65	31.12	28.00	370
												29.00	336
												33.00	708
8.12	8.00	2.49	10.61	9.00	2.66	.23	2.89	3.00	2.24	2.06	27.14	24.50	373
*8.78	9.00	1.80	10.58	10.00	2.39	-------	2.39	2.00	1.29	1.23	22.62	24.00	1149
												26.00	1836
5.98	6.00	2.36	8.34	7.00	10.86	-------	10.86	10.00	2.46	2.47	33.88	34.00	565
												30.50	376
												33.00	771
8.16	8.00	1.55	9.71	9.00	2.26	-------	2.26	2.00	1.01	1.03	20.31	23.50	567
												20.00	497
												17.50	1075

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	FREDERICK LUDLAM CO., BALTIMORE, MD.		
1271	Ludlam' Cecrops Fertilizers, Harvest Queen.	Emanuel Hoffman, East Berlin,	8.38
1545		Joshua Potter, Center Hall,	
650	Ludlam's Cecrops Fertilizer's, Potato and Tobacco.	Geo. Rafferty, Grampian,	10.48
755		John P. Wadel, Shippensburg,	
956	Ludlam's Cecrops Fertilizers, Spring Special.	W. D. Hess, Quarryville,	10.52
		Amos F. Bushey, York Springs, R. D. 2.	11.12
224	Ludlam's Cecrops Fertilizers, Standard,		
957	†Ludlam's Cecrops Fertilizers, Standard Potash.	W. J. Hess, Quarryville,	10.78
1819		Peter Zirfing, New Bloomfield,	
	MAPES FORMULA AND PERUVIAN GUANO CO., NEW YORK CITY, N. Y.		
369	†Mapes' Average Soil Complete Manure,	W. H. Mutb & Co., Lititz,	5.19
886		W. H. Diehl, Northumberland, R. D.	
889	Mapes' Economical Potash Manure,	W. H. Diehl, Northumberland, R. D.	5.10
366	†Mapes' Economical Potato Manure,	W. H. Muth, Lititz,	4.88
815		John B. Satterthwaite, Woodbourne,	
367	Mapes' General Crop Brand,	W. H. Muth, Lititz,	5.70
816	†Mapes' Potato Manure,	John B. Satterthwaite, Woodbourne,	
530		A. F. Kimmel, Orwigsburg,	3.56
1619		Kelley & Rerwan, Blossburg,	
368	†Mapes' Tobacco Manure, Wrapper Brand,	W. H. Muth & Co., Lltitz,	7.30
890		W. H. Diehl, Northumberland, R. D.	
529	Mapes' Top Dresser Improved (Full Strength).	A. F. Kimmel, Orwigsburg,	5.91
	N. MARKEL, SEITZLAND, PA.		
1305	Markel's Electric Phosphate,	D. J. Trout, Stewartstown,	7.12
	D. B. MARTIN CO., PHILADELPHIA, PA.		
399	Martin's Bull Head Fertilizer for Cotton and Tobacco.	Lancaster Co. Farmers' Assn., Manheim, R. D.	11.39
383	†Martin's Corn and Cereal Special,	E. K. Brubaker, Lititz, R. D. 2	11.21
5		John K. Miller, Summit Station,	
1133		S. G. Cook, Potterville,	
431	Martin's Early Truck and Vegetable Grower.	A. E. Walker, Burgettstown,	7.94
381	Martin's Claremont Vegetable Grower,	E. R. Brubaker, Lititz,	10.67
533	†Martin's Gilt Edge Potasb Manure,	A. F. Kimmel, Orwigsburg,	8.16
382		E. R. Brubaker, Lititz,	
1629		H. W. Rehmeyer, Turnpike,	
153	†Martin's 1-8-4,	Ed. Houck, Bangor,	10.98
8		John K. Miller, Summit Sta.,	
398		Lancaster Co. Farmers' Asson., Manheim, R. D.	
150	†Martin's Prize Potato,	Ed Houck, Bangor,	10.71
7		John K. Miller, Summit Sta.,	
395		Lancaster Co., Farmers' Assn., Manheim, R. D. 1.	
397	†Martin's Special Compound,	Lan. Co. Farmers' Assn., Manheim, R. D.	10.66
262		H. Cook & Co., Dillsburg,	
429		A. E. Walker, Burgettstown,	
428	†Martin's Special Potato Manure,	A. E. Walker, Burgettstown,	10.11
216		Lebanon Hdw. Co., Lebanon,	
828		H. A. Mendenhall, Toughkenamon,	
427	†Martin's Sure Grower,	A. E. Walker, Burgettstown,	10.39
149		Ed. Houck, Bangor,	
1324		H. B. Low & Son, Orangeville,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
8.70	8.00	1.28	9.98	9.00	2.21	-------	2.21	2.00	.77	.82	19.57	18.65	1271
												19.40	1545
8.65	8.00	1.01	9.66	9.00	10.61	-------	10.61	10.00	1.63	1.65	32.04	29.15	650
												28.00	755
9.43	9.00	1.28	10.71	10.00	7.46	-------	7.46	7.00	.96	.82	26.56	24.00	956
7.98	8.00	1.39	9.37	9.00	4.50	-------	*4.50	5.00	1.79	1.65	25.99	22.00	224
8.43	8.00	.94	9.37	9.00	4.30	-------	4.30	4.00	.93	.82	22.20	22.00	957
												22.00	1819
7.21	7.00	1.29	8.50	-------	4.93	.83	5.76	5.00	3.94	4.12	36.44	36.00	369
												40.00	886
3.95	-------	2.55	6.50	-------	2.66	5.76	8.42	-------	3.42	-------	35.11	40.00	889
5.09	4.00	1.58	6.67	6.00	2.66	5.42	8.08	8.00	3.47	3.29	35.65	36.00	366
												37.00	815
8.24	8.00	2.00	10.24	10.00	2.27	-------	2.27	2.00	*1.45	1.65	22.68	23.50	367
												40.00	816
8.26	8.00	1.39	9.65	9.00	6.66	1.23	7.89	6.00	3.70	3.71	37.18	40.00	530
												42.00	1619
3.87	-------	1.10	4.97	4.50	5.73	5.68	11.41	10.50	*5.93	6.18	48.97	48.00	368
												50.00	890
5.48	5.00	2.26	*7.74	8.00	2.53	1.78	4.31	4.00	10.06	9.88	61.74	53.00	529
10.16	9.00	.68	10.84	10.00	2.22	-------	2.22	2.00	.53	.41	16.71	18.00	1305
8.35	8.00	.99	9.34	-------	3.26	-------	3.26	3.00	2.55	2.47	28.34	22.00	399
												19.60	383
8.52	8.00	.98	9.50	-------	2.27	-------	2.27	2.00	1.64	1.65	23.37	21.00	5
												20.00	1133
7.50	6.00	.85	8.35	-------	7.92	-------	7.92	8.00	*2.76	3.30	33.07	31.50	431
7.90	7.00	1.02	8.92	-------	5.50	-------	5.50	5.00	2.61	2.47	30.42	24.60	381
7.84	7.00	.64	8.48	-------	10.99	-------	10.99	10.00	2.29	2.47	34.42	30.00	533
												28.60	382
												29.00	1629
8.58	8.00	.57	9.15	-------	4.31	-------	4.31	4.00	.94	.82	22.16	20.50	153
												20.00	8
												16.75	398
8.72	8.00	.59	9.31	-------	5.20	4.46	*9.66	10.00	1.84	1.65	32.91	27.50	150
												30.00	7
												24.50	395
8.37	8.00	1.19	9.56	-------	5.12	-------	5.12	5.00	1.71	1.65	26.46	20.50	397
												22.50	262
												27.50	429
												24.50	428
7.83	8.00	.81	8.64	-------	4.94	-------	4.94	5.00	.79	.82	21.49	18.50	216
												22.00	828
												21.00	427
8.62	8.00	.74	9.36	-------	1.49	-------	1.49	1.00	.79	.82	18.72	16.50	149
												16.00	1324

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	MEDICUS FERTILIZER CO., PHILADELPHIA, PA.		
2030	Blood, Bone and Potash,	W. S. Buckman, Hatboro,	13.56
1768	Corn and Potato Manure,	W. S. Buckman, Hatboro,	12.46
1772	Grain and Grass,	W. S. Buckman, Hatboro,	26.35
1767	Vegetable Guano,	W. S. Buckman, Hatboro,	7.63
	FREDERICK MEEHRING, BRUCEVILLE, MD.		
1243	General Crop Grower,	J. N. Slifer, Littlestown,	10.57
1244	Twenty-Six Dollar Phosphate,	J. N. Slifer, Littlestown,	11.01
	MILLER FERTILIZER CO., BALTIMORE, MD.		
363	†Farmer's Profit,	W. H. Muth & Co., Lititz,	7.87
297		M. T. Harkins, Hickory Hill,	
1254		Charles Carbaugh, Hanover, R. D. 5,	
364	†Harvest Queen Phosphate,	W. H. Muth & Co., Lititz,	9.47
241		Biglerville Warehouse Co., Biglerville.	
1287		Wm. Overdorf, Windsor, R. D. 1,	
775	†Hustler Phosphate,	J. R. Miller Sons, New Kingston,	8.52
1286		Wm. Overdorf, Windsor, R. D. 1,	
242	Pimlico,	Biglerville Warehouse Co., Biglerville.	7.77
776	†Potato and Vegetable Grower,	J. R. Miller, New Kingston,	8.39
1253		Charles Carbaugh, Hanover, R D. 5,	
365	†Special Tobacco Grower,	W. H. Muth & Co., Lititz,	7.91
1625		J. P. Suchart, New Freedom,	
295	Standard Phosphate,	M. T. Harkins, Hickory Hill,	5.59
296	†W. G. Phosphate,	M. T. Harkins, Hickory Hill,	7.36
1626		J. P. Suchart, New Freedom,	
	NASSAU FERTILIZER CO., NEW YORK, N. Y.		
1180	Common Sense Potato Manure,	Geo. L. Nyce, Bushkill,	13.14
1093	†General Favorite,	J. D. Graybill & Sons, Bellville,	10.42
685		C. F. Snyder & Son, Mifflinburg,	
1276		Brillinger & Swartz, Emigsville,	
480	†Gladiator Truck and Potato,	C. J. Ford, LeRaysville,	7.59
1490		Pharos L. Brubaker, Ephrata, R. D. 2.	
589	Old Hickory,	Edward Jones, Fairdale,	10.17
778	†Special Potato Fertilizer,	J. H. Koller, Mechanicsburg,	11.19
777		J. H. Koller, Mechanicsburg,	
479		C. J. Ford, LeRaysville,	
1179		Geo. L. Nyce, Bushkill,	
	G. OBER & SONS CO. OF BALTIMORE CITY, BALTIMORE, MD.		
1635	Ober's Overland Special Mixture,	J. W. Glatfelter, Rossville,	9.86
1413	Ober's Special Plant Food,	S. J. Lonther, Carroltown,	9.51
1282	†Ober's Stag Guano,	Jonathan Geesey & Son, Dallastown,	11.98
1700		J. H. Neese, Bellefonte, R. F. D.,	
	PATAPSCO GUANO CO., BALTIMORE, MD.		
73	†Coon Brand Guano,	G. A. Harley, Warrendale,	11.87
52		W. E. Harley, Thompsontown,	
210		Jos. Berkholder, Hummelstown,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.		Insoluble.	Available.		Present as muriate.	Present as sulphate.	Total.						
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.	Found.	Guaranteed.			
*6.42	8.00	1.57	*7.99	9.00	10.96	-------	10.96	10.00	*2.65	3.28	34.98	-------	2030
*7.51	8.00	2.68	10.19	9.00	8.70	-------	*8.70	10.00	1.47	1.64	28.84	26.00	1768
8.38	7.00	2.86	11.24	8.00	1.12	-------	1.12	1.00	.88	.82	17.57	18.00	1772
6.39	6.00	3.10	9.49	7.00	5.90	-------	5.90	6.00	1.65	1.64	25.96	24.00	1767
10.16	10.00	4.54	14.70	11.00	2.14	-------	2.14	1.15	.88	.82	19.65	17.00	1243
11.39	11.00	5.57	16.96	12.00	1.92	-------	1.92	1.50	1.38	1.23	27.02	19.00	1244
8.30	8.00	.41	8.71	8.50	5.33	-------	5.33	5.00	.96	.83	22.86	[22.00	366
												{24.00	297
												[22.00	1254
9.39	9.00	.50	9.89	9.50	3.08	-------	3.08	2.75	1.11	1.03	22.41	[21.50	364
												{21.00	241
												[20.00	1287
8.41	8.00	.97	9.38	8.50	1.64	-------	1.64	1.00	1.04	.83	19.89	[17.50	775
												[18.00	1283
8.28	8.00	.71	8.99	8.50	9.91	-------	9.91	10.00	1.80	1.65	31.52	27.50	242
8.39	8.00	.71	9.10	8.50	4.01	-------	4.01	4.00	1.85	1.65	25.82	{21.50	776
												[23.00	1253
7.92	8.00	.40	8.32	8.50	4.13	-------	4.13	4.00	1.73	1.65	24.87	[24.00	365
												[23.00	1625
8.44	8.00	1.17	9.61	8.50	3.19	-------	3.19	3.00	2.56	2.47	28.46	28.00	295
7.51	7.00	.89	8.40	7.50	2.33	-------	2.33	1.00	.44	.42	16.94	[20.00	296
												[15.00	1620
8.07	8.00	1.52	9.59	9.00	4.15	-------	4.15	4.00	*1.36	1.65	23.78	25.00	1180
												[------	1093
8.79	8.00	.92	9.71	9.00	4.25	-------	4.25	4.00	.94	.82	22.47	{20.30	685
												[20.00	1276
7.56	7.00	1.81	9.37	8.00	7.62	-------	7.62	7.00	*2.81	3.29	33.49	[33.50	480
												[32.00	1490
10.68	10.00	.92	11.60	11.00	8.03	-------	8.03	8.00	.78	.82	27.61	[25.50	589
												[24.00	778
8.83	8.00	.64	9.47	9.00	10.08	-------	10.08	10.00	1.62	1.65	31.23	[28.00	777
												{30.00	479
												[31.00	1179
8.16	8.00	.58	*8.74	9.00	9.62	-------	*9.62	10.00	1.61	1.65	30.09	30.00	1635
9.20	9.00	.23	*9.43	10.00	5.53	-------	5.53	5.00	*1.45	1.65	26.18	26.00	1413
8.64	8.00	.51	9.15	9.00	4.68	-------	4.68	4.00	.76	.82	21.68	[20.00	1282
												[19.50	1700
9.56	9.00	.89	10.45	10.00	3.26	-------	3.26	3.00	.78	.82	21.54	[28.00	73
												{------	52
												[19.00	210

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
232	†Patapsco B. B. & P. Brand,	E. C. Thomas Gettysburg,	10.09
53		W. E. Harley, Thompsontown,	
491		Walter & Frederick, Montandon,	7.95
410	†Patapsco Corn and Tomato Fertilizer,	Russell Bros., Washington,	11.38
1816		Jacob Fritz, New Bloomfield,	
489	†Patapsco Early Trucker for Quick Growth.	Walter & Frederick, Montandon,	7.95
1279		H. P. Kocher, Wrightsville,	
1063	Patapsco Fish Guano,	G. W. Robison, Allenwood,	12.46
1885	Patapsco General Crop Producer,	Lewis Green, Little Gap,	9.61
74	†Patapsco Grain and Grass Producer,	G. A. Harley, Warrendale,	13.45
469		Fred. Allis, Rome,	
205	†Patapsco Potato Manure,	Jos. Berkholder, Hummelstown,	8.91
1884		Lewis Green, Little Gap,	
492	Patapsco Premium Superphosphate,	Walter & Frederick, Montandon,	11.26
1280	Patapsco Tobacco and Potato Fertilizer,	H. P. Kocher, Wrightsville,	10.09
	PENNSYLVANIA FERTILIZER CO., THE, BUFFALO, N. Y.		
1597	†Big Bonanza,	Reynoldsville, Reynoldsville,	9.99
417		J. M. Raab Bro., Midway,	
1907		H. A. Snyder, Strawberry Ridge,	
	J. D. PERKINS, COATESVILLE, PA.		
824	Perkins' Monarch Phosphate,	Edward Tingley, New London,	12.38
	VALENTINE PETROSKEY & SON, LATROBE, PA.		
880	Petroskey's Complete Fertilizer,	P. H. Saxman, Latrobe,	2.72
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.		
1807	†Insular Guano or All Crops,	A. H. Ulsch, Millerstown,	6.54
1918		M. Gillis, Hughesvile,	
1033	†Piedmont Pennsylvania Grain Grower,	Jno. G. Simpson, Huntingdon,	7.34
874		Eli Sell Co., Greensburg,	
1739		James Maust, Elk Lick,	
1615	Piedmont Perfection Guano,	John McLean, Liberty,	7.21
1614	†Piedmont Pennsylvania Potato Producer,	J. McLean, Liberty,	6.21
1035		J. G. Simpson, Huntingdon,	
1686		J. G. Dubbs, Bellefonte,	
	PITTSBURGH PROVISION AND PACKING CO., PITTSBURG, PA.		
1859	†Corn and Potato Fertilizer,	W. J. Gilson, Titusville,	6.46
265		Weddle & Sutton, West Newton,	
1936		B. Way & Co., Freeport,	
1937	Special Potato Fertilizer,	B. Way & Co., Freeport,	7.83
	POLLOCK FERTILIZER CO., BALTIMORE, MD., BY A. A. C. C. OF NEW YORK.		
1044	Ammoniated Superphosphate,	J. H. Scott, Petersburg,	11.87
623	†Crop Invigorator,	W. A. Walker, Shirleysburg,	11.66
1046		J. H. Scott, Petersburg,	
601	†Special Potato and Tobacco Fertilizer,	I. E. Imler, Alum Bank,	11.27
323		Harvey Spencer, Cochranville,	
1100		B. J. Crissman, Curwensville,	
1283	†Superior Corn and Tomato Fertilizer,	Samuel A. Barshinger, Red Lion,	6.99
1703		Geo. W. Knisely, Clayburg,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
8.26	8.00	.92	9.18	9.00	2.24	-------	2.24	2.00	.47	.41	15.04	[17.00 ------ [16.00	232 53 491
9.44	9.00	1.33	10.77	10.00	2.42	-------	2.42	2.00	1.21	1.23	22.36	[28.00 [23.00	410 1816
8.10	7.00	1.84	9.94	8.00	5.44	-------	5.44	5.00	4.08	4.11	37.81	[34.00 [34.00	489 1279
6.94	6.00	.24	7.18	7.00	2.02	-------	2.02	2.00	1.58	1.65	20.95	23.00	1063
6.92	7.00	1.65	8.57	8.00	1.29	-------	1.29	1.00	.73	.82	16.99	19.00	1885
8.51	8.00	1.19	9.70	9.00	3.89	-------	3.89	4.00	.96	.82	21.97	[28.00	74
6.23	5.00	.91	7.14	6.00	8.96	-------	*8.96	10.00	1.51	1.65	27.18	[21.00 [26.00 [27.00	469 205 1884
8.03	8.00	1.66	9.69	9.00	10.11	-------	10.11	10.00	1.53	1.65	30.78	27.00	492
7.92	8.00	.91	8.83	9.00	4.03	-------	4.03	4.00	1.69	1.65	24.82	24.00	1280
8.52	8.00	1.64	10.16	9.00	4.59	-------	4.59	4.00	1.03	.80	23.35	[25.00 [23.00 [18.00	1597 417 1907
*9.78	10.00	.23	*10.01	11.00	4.91	-------	4.91	5.00	*.93	1.23	30.34	27.00	824
3.83	-------	9.00	12.83	10.00	6.91	-------	6.91	5.50	*4.00	4.94	37.93	30.00	880
7.21	7.00	.31	7.52	-------	2.39	-------	2.39	2.00	.56	.41	16.84	[16.00 [18.00	1807 1918
8.19	7.00	.26	8.45	-------	5.04	-------	5.04	5.00	1.05	.82	22.82	[21.00 [25.00 [22.00	1033 874 1739
8.14	8.00	.54	8.68	-------	5.43	-------	7.43	5.00	1.53	1.65	25.60	27.00	1615
7.23	6.00	.36	7.59	-------	8.95	-------	*8.95	10.00	1.52	1.65	27.93	[29.00 [28.00 [33.00	1614 1035 1686
9.01	9.00	1.21	*10.22	11.00	2.91	-------	2.91	3.00	1.63	1.43	24.64	[27.00 [24.00 [26.00	1859 265 1936
9.98	9.00	1.28	11.26	10.00	6.90	-------	6.90	7.00	*1.22	1.64	27.72	30.00	1937
8.79	8.00	1.03	9.82	9.00	1.96	-------	1.96	2.00	1.51	1.65	22.69	-------	1044
8.54	8.00	.80	9.34	9.00	4.24	-------	4.24	4.00	.80	.82	21.49	[------ [------	623 1046
7.91	8.00	1.49	9.40	9.00	3.96	-------	3.96	4.00	1.57	1.65	24.28	[25.25 [24.00 [26.00	601 323 1100
8.69	8.00	1.25	9.94	9.00	2.16	-------	2.16	2.00	.76	.82	19.50	[20.00 [20.00	1283 1703

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	RAMSBURG FERTILIZER CO., FREDERICK, MD.		
1247	†Old Virginia Compound,	Humbert & Krug, Littlestown,	10.91
1669			11.01
1246	Ammoniated Phosphate,	Franklin Miller & Son, Greencastle, Humbert & Krug, Littlestown,	
	RAISIN MONUMENTAL CO., BALTIMORE, MD.		
1318	Raisin's Empire Guano,	H. B. Low & Son, Orangeville,	9.43
1649	Raisin's General Tobacco Grower,	L. A. Geiger, Joanna,	8.70
831	†Raisin's Genessee Valley Root Manure,	W. H. Walker & Co., Kennett Sq.,	9.17
249		Aspers Milling & Products Co., Aspers.	
1056		Adam Krug, Allenwood,	
250	†Raisin's National Crop Compound,	Aspers Milling & Produce Co., Aspers.	13.06
58		W. W. Book, Port Royal,	
1154		H. D. Miller, Mifflinville,	
1242	†Raisin's United Grain Grower,	J. R. Weaver & Bro., New Oxford,	9.26
57		W. W. Book, Port Royal,	
1833		Crawford Bros. Co., North East,	
1057	†Raisin's Royal Fish, Bone and Potash,	Adam Krug, Allenwood,	11.59
319		E. H. Keen & Co., Parkesburg,	
1080		Isaac Shirley, McClure,	
690	†Raisin's Vegetable Special,	Sam'l B. Miller, Mifflinburg, R. F. D.	8.85
625		O. H. Uhler, Easton, R. F. D. No. 1	
893		S. P. Snyder, Northumberland, R. D. 1.	
1257	†Raisin's Wheat, Corn and Oats Mixture,	J. D. Markle, Hanover,	9.41
56		W. W. Book, Port Royal,	
1689		Jno. G. Dubbs, Bellefonte,	
1535	†Raisin's I. X. L. Fertilizer,	C. B. McCormick, State College,	12.29
1906		James W. Hause, Jerseytown,	
1317	†Raisin's X. X. X. Fertilizer,	H. B. Low & Son, Orangeville,	10.89
608		A. C. Richards & Son, Schellsburg,	
1848		R. D.	
		W. A. Porter, Cambridge Springs,	
1081	†William Penn Crop Grower,	Isaac Shirey, McClure,	7.76
832		W. H. Walker & Co., Kennett Sq.,	
1908		H. A. Snyder, Strawberry Ridge,	
	READING BONE FERTILIZER CO., READING, PA.		
599	†Farmer's Tankage and Potash for Corn, Grain and Grass.	Wm. Hunt, Great Bend,	7.16
570		Krause & Freehley, Marwood,	
1264		K. A. Smyser (for own use), York,	
291	†Farmer's Union Fertilizer,	Reading Bone Fert. Co., Reading,	7.09
899		C. L. Pope, Catawissa, R. D. 5,	
449	†Gilt Edge Potato and Tobacco Grower,	Hadisty & Son, Tamaqua,	5.98
255		Grover C. Myers, Idavile,	
1461		H. S. Hoover, Campbelltown,	
1661	Never Fail Crop Grower,	D. H. Latshaw, Bechtelsville,	7.62
585	†Sterling Potato Grower,	P. L. Tonhey, Warrenham,	6.66
97		Sam'l Savidge, Valley View,	
820		H. B. Rosenberger, Doylestown,	
2035	Tobacco and Truck Special,	Ed. Kreckel, Lancaster,	7.90

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
10.10	8.00	2.08	12.18	-------	4.16	-------	4.16	4.00	1.11	1.00	24.97	20.00	1247
												20.00	1669
10.31	10.00	3.17	13.48	-------	2.02	-------	2.02	2.00	.98	.82	23.05	18.50	1246
9.18	8.00	2.27	11.45	9.00	1.95	-------	1.95	2.00	1.73	1.65	24.84	20.50	1318
8.04	8.00	3.63	11.67	9.00	3.01	-------	3.01	3.00	1.63	1.65	24.90	20.00	1649
*7.46	8.00	2.08	9.54	9.00	10.35	-------	10.35	10.00	.89	.82	27.85	26.00	831
												25.00	249
												24.00	1056
8.09	8.00	2.75	10.84	9.00	3.94	-------	3.94	4.00	.87	.82	21.90	20.75	250
												21.00	58
												20.00	1154
8.35	8.00	2.23	10.58	9.00	2.66	2.15	2.81	2.00	.87	.82	21.25	17.25	1242
												20.50	57
												20.00	1833
7.91	8.00	3.44	11.35	9.00	3.37	-------	3.37	3.00	1.53	1.65	24.61	22.00	1057
												23.00	319
												22.00	1080
												-------	690
7.99	8.00	1.44	9.43	9.00	4.30	3.49	*7.79	10.00	*1.26	1.65	27.76	24.65	625
												28.50	893
8.23	8.00	1.84	10.07	9.00	1.97	-------	1.97	2.00	.56	.41	15.48	16.50	1257
												17.00	53
												19.50	1689
9.94	9.00	1.90	11.84	10.00	3.26	-------	3.26	3.00	1.08	.82	23.79	20.00	1535
												18.00	1906
8.60	8.00	1.98	10.58	9.00	5.30	-------	5.30	5.00	1.51	1.65	26.38	22.50	1317
												23.00	608
												24.50	1848
8.40	8.00	1.80	10.20	9.00	1.44	-------	1.44	1.00	.95	.82	19.64	17.50	1031
												20.00	832
												17.00	1908
8.27	8.00	1.16	9.43	9.00	4.50	-------	4.50	4.00	.92	.82	22.12	22.00	509
												25.00	579
8.08	8.00	1.44	9.52	9.00	8.18	-------	8.18	8.00	1.51	1.64	28.57	16.75	1264
												24.00	291
												26.50	899
7.32	7.00	1.35	8.67	8.00	10.22	-------	10.22	10.00	1.51	1.64	29.74	33.00	449
												30.00	255
												28.00	1461
7.80	8.00	1.34	9.14	9.00	1.77	-------	1.77	1.00	.76	.82	18.21	-------	1661
7.51	8.00	1.70	9.21	9.00	10.89	-------	10.89	10.00	1.05	.82	28.78	28.00	585
												-------	97
7.16	6.00	1.38	8.54	7.00	*5.48	-------	6.24	6.00	*2.19	2.46	28.02	28.50	829
												-------	2035

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	ROBERT A. REICHARD, ALLENTOWN, PA.		
155	†Golden Harvest Phosphate,	William Mitman, Easton, R. F. D. 3.	9.19
537		Westn H. Kern, Emerald,	
156	†Lehigh Potato Manure,	William Mitman, Easton, R. F. D. 3	10.23
107		James Lichtenwalter, Allentown, R. D. 4.	
165		Mr. Gerlouch, Bethlehem,	
166	†Peerless Phosphate,	Mr. Gerlouch, Bethlehem,	8.56
154		William Mitman, Easton, R. F. D. No. 3.	
538		Weston H. Kern, Emerald,	
106	†Trueker's Favorite,	James Lichtenwalter, Allentown, R. D. 4.	6.65
164		Mr. Gerlouch, Bethlehem,	
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.		
303	†Royster's Big Yield Potato Producer,	H. B. Shortlidge, Kelton,	6.62
279		King Bros., Uniontown,	
547		Orville Wootring, Jordan,	
789	†Royster's Champion Crop Compound,	George Watson, Embreeville,	9.95
435		W. M. Gehman, Macungie,	
1124		E. C. Rogers, Brooklyn,	
145	†Royster's Corn and Hop Special Fertilizer	A. W. Sandt, Martin's Creek,	7.36
1402		Thos. Crayton, Leroy,	
146	†Royster's Challenge Complete Compound,	A. W. Sandt, Martin's Creek,	7.69
1654		Chas. Geiger (pur. from factory for own use), Scarlett Mills.	
1663	†Royster's Excellenza Tobacco Guano,	Chas Geiger (pur. from factory for own use), Scarlett Mills.	8.65
1774		S. A. Phillipy, Schaefferstown, R.,	
63	†Royster's Farmer's Delight Fertilizer,	B. F. Gayman, Thompsontown,	8.57
258		John W. King, York Springs, R. D. 6.	
546	†Royster's Fish, Flesh and Fowl,	Orville Wootring, Jordan,	8.53
305		H. B. Shortlidge, Kelton,	
1333		E. S. Lemon, Forks, R. D.,	
720	†Royster's Gold Seal Potato and Tobacco Special.	Hopbottom Grange, Hopbottom,	8.58
441		Amandus Wotring, Schneeksville,	
788		George Watson, Embreesville,	
1334	Royster's Good Cheer Brand,	E. L. Lemon, Forks, R. D.,	6.62
88	†Royster's Harvest King Fertilizer,	Jacob Barnhart, Harmony,	9.23
1547		R. D. Forman, Centre Hall,	
630	†Royster's Lehigh Potato Grower,	Erwin Fisher, Nazareth,	5.38
304		H. B. Shortlidge, Kelton,	
1340		J. H. Long, Orwigsburg,	
710	†Royster's Practical Truck Guano,	The Harford Grange, Harford,	7.69
1953		H. L. Stultz, Hollidaysburg,	
1165	†Royster's Prolific Potato Producer,	C. E. Houck, Beaver Valey,	7.37
90		Jacob Barnhart, Harmony,	
1604		Preston Bros., Canton,	
278	†Royster's Special Wheat, Corn and Grass Produeer.	King Bros., Uniontown,	7.42
1708		Alonza Cwyle, Osterburg,	
1891	Royster's Universal Crop Grower,	Amandus Wotring, Snecksville,	9.06
436	†Royster's Wheat, Oats and Barley Fertilizer.	W. M. Gehman, Maeungie,	8.19
89		Jacob Barnhart, Harmony,	
525		Jos. Baker, Ebensburg, R. D.,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
8.26	8.00	.69	*8.95	10.00	5.65	-------	5.65	5.00	*1.39	1.64	25.29	------	155
												24.00	537
7.72	8.00	1.01	*8.73	10.00	9.90	-------	9.90	10.00	1.62	1.64	30.19	------	156
													107
												32.00	165
7.87	8.00	1.28	*9.15	9.50	4.80	-------	4.80	4.00	.81	.82	21.57	22.00	163
												------	154
												20.50	538
7.09	6.00	.20	*7.29	7.50	8.84	-------	8.84	8.00	*2.93	3.28	33.99	------	106
												36.00	164
												27.00	303
5.00	5.00	1.12	6.12	5.50	9.57	-------	*9.57	10.00	1.46	1.65	26.38	32.00	279
												25.00	547
												24.00	789
8.01	8.00	1.42	9.43	8.50	4.31	-------	4.31	4.00	1.68	1.65	25.38	25.00	435
												24.00	1124
8.03	8.00	.84	8.87	8.50	2.70	-------	*2.70	3.00	*1.30	2.06	21.70	23.50	145
												27.00	1402
10.77	8.00	2.19	12.96	8.50	6.51	-------	6.51	6.00	1.58	1.65	30.36	22.40	146
												25.00	1654
7.82	8.00	2.16	9.98	8.50	7.05	-------	7.05	7.00	3.34	3.29	35.90	35.00	1663
												36.00	1774
*7.79	8.00	.78	8.57	8.50	2.48	-------	2.48	2.00	.56	.41	18.21	------	63
												16.00	258
8.06	8.00	2.04	10.10	8.50	3.44	-------	3.44	3.00	1.71	1.65	24.86	22.00	546
												24.00	305
												23.00	1333
8.17	8.00	1.12	9.29	8.50	9.64	-------	*9.64	10.00	1.71	1.65	30.79	24.00	720
												------	441
												30.00	783
*6.86	8.00	.98	7.86	8.50	4.47	-------	4.47	2.00	.94	1.03	20.73	22.00	1334
*7.61	8.00	2.31	9.92	8.50	2.17	-------	2.17	2.00	1.58	1.65	22.75	26.00	88
												21.90	1547
												28.00	630
7.26	7.00	1.03	8.29	7.50	14.02	-------	*14.02	15.00	.96	.82	30.91	30.00	304
												28.50	1346
7.96	8.00	1.13	9.09	8.50	5.81	-------	5.81	6.00	2.54	2.47	30.61	25.00	710
												35.00	1953
												21.65	1165
6.17	6.00	1.03	7.20	6.50	5.01	-------	5.01	5.00	1.22	1.23	21.68	26.00	90
												25.00	1604
*7.85	9.00	1.49	9.34	9.50	3.33	-------	3.33	2.00	1.33	.82	22.70	24.00	278
												19.00	1708
8.66	7.00	1.31	9.97	7.50	3.13	-------	3.13	1.00	1.00	.82	21.62	17.00	1891
												20.00	436
*7.77	8.00	1.22	8.99	8.50	2.15	-------	2.15	2.00	1.01	.82	19.69	24.00	89
												19.90	525

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	SCHAAL-SHELDON FERTILIZER CO., BUFFALO, N. Y.		
722	†Empire,	P. A. Drane, Sarver,	8.57
1543		Harry Shirk, Center Hall,	
1850	Farmer's Favorite,	Brooklyn Milling Co., Spartansburg,	9.16
1002		J. L. Fisher, Lancaster, R. No. 6,	
576	†Guano,	P. A. Drane, Marwood,	9.91
1851		Brooklyn Milling Co., Spartansburg,	
1003	Potato and Tobacco Fertilizer,	J. L. Fisher, Lancaster, R. No. 6,	5.17
1483		J. L. Fisher, Lancaster, R. No. 6,	
721	†Schaal's Corn and Potato,	P. A. Drane, Sarver,	9.48
1852		Brooklyn Milling Co., Spartansburg,	
48	Superior,	John Artley, Muncy,	10.28
1001	†Trucker's Manure,	J. L. Fisher, Lancaster, R. No. 6,	8.52
1544		Harry Shirk, Center Hall,	
	SCOTT FERTILIZER CO., THE, ELKTON, MD.		
1017		Emory Reichenbach, St. Johns,	
991	†Scott's Corn and Oats Grower,	S. H. Beiler, Witmore,	6.37
1379		Wm. C. Holbrook, Ercildown,	
965		A. B. Groff, New Holand,	
813	†Scott's Potato Grower,	Samuel T. Erwin, Somerton,	9.61
1467		Elias Brubaker, Richland,	
1380	†Scott's Potato and Truck Special,	Wm. C. Holbrook, Ercildown,	7.80
1469		Elias Brubaker, Richland,	
1470	Scott's Sure Growth Compound,	Elias Brubaker, Richland,	7.14
967	†Scott's Sure Growth Superphosphate,	A. B. Groff, New Holland,	9.24
1018		Emery Reichenback, St. Johns,	
	A. B. SCHUMACHER, HAZLETON, PA.		
1007	General Brand Fertilizer,	Emil Freiderick, Conyngham,	7.38
	M. L. SHOEMAKER & CO., LTD., PHILADELPHIA, PA.		
212		J. B. Shaffer, Swatara,	
192	†Shoemaker's Special 10% Potato Fertilizer No. 2.	N. W. Stroup, Elizabethville,	8.09
1894		S. B. Kuntz, Trichlers,	
543	†Shoemaker's Swift Sure Guano for Tomatoes, Truck and Corn.	Nathan Handwerk, Saegersville,	7.86
1652		L. A. Geiger, Joanna,	
1025	†Shoemaker's New Jersey Special for Oats,	Frank Hain, Cressona,	8.23
1926		Furst Bros., Cedar Springs,	
1652		Chas. Geiger farm, Scarlett Mills,	
333	†Shoemaker's Swift Sure Superphosphate for Potaotes.	W. E. Irvin, Somerton,	7.84
1893		S. B. Kuntz, Trichler's	
10	†Shoemaker's Special 10% Potato Fertilizer No. 1.	A. F. Spittler, Pine Grove, R. D.,	8.44
334		W. E. Erwin, Somerton,	
	CHAS. A. SICKLER & Bro., WILKESBARRE, PA.		
719	Empire Phosphate,	M. McVicar, Hopbottom,	6.46
718	Grave's Potato and Tobacco Manure,	M. McVicar, Hopbottom,	8.58
	SMITH AGRICULTURAL CHEMICAL CO., COLUMBBUS, O.		
1457	Ohio Farmer's Excelsior Phosphate,	H. S. Amiden, Edinboro,	6.19
	STANDARD GUANO CO., BALTIMORE, MD.		
1740	Best Truck Crop Grower,	James Maust, Elk Lick,	9.09
942	Standard Farmer's Favorite,	S. M. Book & Bro., Quarryville,	7.26
944	Great Grain Grower,	S. M. Book & Bro., Quarryville,	7.56

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen. in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
7.74	7.00	1.63	9.37	8.00	2.84	-------	2.84	1.00	1.11	.82	21.00	[22.00	722
												[------	1543
*7.55	8.00	2.65	10.20	9.00	2.20	-------	2.20	2.00	.84	.82	19.50	20.50	1850
												[18.00	1006
8.00	8.00	1.43	10.03	9.00	4.05	-------	4.05	4.00	.94	.82	22.33	{25.00	576
												[22.00	1851
8.19	8.00	1.46	9.65	9.00	9.81	-------	9.81	10.00	*1.36	1.65	29.61	26.50	1003
												[21.25	1483
8.45	8.00	1.81	10.26	9.00	4.35	-------	4.35	4.00	1.54	1.65	25.39	{27.00	721
												[22.50	1852
7.95	7.00	.91	8.86	8.00	8.86	-------	8.86	9.00	*.70	.82	25.16	25.00	48
9.14	8.00	1.44	10.58	9.00	5.95	-------	5.95	6.00	*2.26	2.47	37.93	[28.00	1001
												[30.50	1544
												[20.00	1017
7.84	8.00	1.87	9.71	-------	3.32	-------	3.32	2.00	.74	.41	21.08	{------	991
												[17.50	1379
												[28.00	965
7.99	8.00	3.57	11.56	-------	10.10	-------	10.10	10.00	1.80	1.65	32.78	{30.00	815
												[28.00	1467
8.61	8.00	1.72	10.33	-------	5.69	-------	5.69	5.00	1.63	1.65	27.33	[25.00	1380
												[25.00	1469
8.15	7.00	2.11	10.26	-------	7.78	-------	7.78	7.00	3.22	3.30	36.27	33.00	1470
9.28	8.00	.56	9.84	-------	3.42	-------	3.42	3.00	1.81	1.65	25.83	[24.00	967
												[25.00	1018
*7.24	‡8.00	3.76	11.00	-------	4.52	-------	*4.52	8.00	2.24	1.65	28.45	25.00	1007
												[------	212
10.45	8.00	1.36	11.81	10.00	9.68	-------	*9.68	10.00	1.73	1.65	33.58	{------	192
												[28.50	1894
9.63	8.00	2.52	12.15	10.00	5.35	-------	5.35	5.00	1.72	1.65	28.65	[24.00	543
												[25.00	1652
10.52	8.00	2.42	13.94	11.00	2.53	-------	2.53	2.00	1.58	.82	26.70	[18.00	1025
												[20.00	1926
9.78	8.00	3.23	13.01	11.00	7.30	-------	7.30	7.00	2.74	2.88	35.90	[33.00	1658
												{32.00	333
8.36	6.00	2.13	10.49	8.00	8.06	-------	*8.06	10.00	3.52	3.30	38.12	[32.00	1893
												[34.00	10
												[34.00	334
*6.44	8.00	2.52	8.96	9.00	4.21	-------	4.21	2.00	1.65	1.65	23.98	21.00	719
6.46	6.00	1.48	7.94	-------	5.87	-------	5.87	5.00	1.38	1.23	24.04	27.00	702
8.19	8.00	.83	9.02	-------	6.42	-------	*6.42	7.00	.76	.82	23.12	27.00	1457
8.14	8.00	.55	8.69	8.50	7.82	-------	7.82	7.00	.99	.82	25.50	25.00	1740
*7.52	8.00	2.20	9.72	8.50	3.08	-------	3.08	3.00	.74	.41	19.70	17.00	942
*7.40	8.00	1.60	9.00	8.50	5.44	-------	5.44	4.00	1.29	.82	20.20	20.00	944

*Constituent falls below guaranty. ‡Guaranteed soluble only.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	STRAYER BROS. & CO., YORK, PA.		
1268	Strayer's Speeial Wheat and Corn,	Strayer Bro. & Co.. York,	11.13
	JOHN T. SWACK, DUBOIS, PA.		
121	Swack's Potato and Truck Fertilizer,	E. J. Flynn, Grampian,	9.39
	SWIFT & CO., BALTIMORE, MD.		
1251	Swift's Ammoniated Guano,	A. P. Lippy, Littlestown,	5.77
392	Swift's Early Potato & Vegetable Grower,	Lan. Co. Farmers' Assn., Mechanicsville,.	8.61
1278	Swift's Early Truck,	H. P. Kocher, Wrigbtsville,	8.18
972	Swift's Golden Grain Grower,	H. W. Swigart, Gap,	10.38
1831	Swift's Pure Ammoniated Bone & Potash,	Jay Spofford, North East,	4.42
1826	Swift's Pure Diamond "B" Fertilizer,	Fred Ruhling, McKean,	9.38
1378	†Swift's Pure Diamond "C" Fertilizer,	B. W. Jones, Doe Run,	7.92
1322		H. B. Low & Son, Orangeville,	
1436		P. G. Young's Sons, New Galilee,	
393	Swift's Pure Diamond "D" Fertilizer,	Lan. Co. Farmers' Assn., Manheim,	7.70
1440	Swift's Pure Diamond "E" Fertilizer,	R. G. Young's Sons, New Galilee,	8.73
1439	†Swift's Pure Grain Fertilizer,	R. G. Young's Sons, New Galilee,	7.82
1683		McCalmont & Co., Bellefonte,	
1780	†Swift's Pure Onion, Potato and Tobacco Fertilizer.	A. G. Houtz, Myerstown, R. No. 1,	10.23
1832		Jay Spofford, North East,	
550	†Swift's Pure Potato, Celery and Onion Grower.	Amandus Wootring, Schnecksville,	4.73
834		W. H. Walker & Co., Kennett Sq.,	
1319	†Swift's Pure Superphosphate,	H. B. Low & Son, Orangeville,	7.47
555		W. J. Kennachy & Co., Mars,	
1437		R. G. Young's Sons, New Galilee,	
391	†Swift's Pure Truck Grower,	Lan. Co. Farmers' Assn., Manheim, R. D.	10.63
162			
548		J. R. Hummel, Bethlehem,	
552	†Swift's Pure Red Steer Fertilizer,	Amandus Wooting, Schnecksville,	8.49
798		Amandus Wooting, Schnecksville,	
974	†Swift's Speeial Potato Fertilizer,	A. L. Stout, Churchville,	8.19
1679		H. W. Sweiger, Gap,	
		McCalmont & Co., Bellefonte,	
	D. A. THOMAS & CO., HAGERSTOWN, MD.		
780	†Empire,	E. W. Rupp, Shiremanstown,	9.75
1643		J. A. Witherspoon, Mercersburg,	
1644	Golden Sheaf,	J. A. Witherspoon, Mercersburg,	9.58
762	†Keystone Compound,	Nickles & Stewart, Shippensburg,	8.09
1223		Joseph Gochenour, Bermudian,	
781	Orchard Special,	E. W. Rupp, Shiremanstown.	8.84
761	†Planter's Mixture,	Nickles & Stewart, Shippensburg,	7.99
779		E. W. Rupp, Shiremanstown,	
	I. P. THOMAS & SONS CO., PHILADELPHIA, PA.		
167	†Normal Phosphate,	Titus C. Bachman, Hellertown,	9 83
563		Morow & Buxton, Valencia,	
853	†Potato Fertilizer,	Wm. J. Moyer, Greenville,	8.77
686		J. F. Grubb, Mifflinburg,	
1335		C. R. Henrie & Son, Millville,	
1606	Special Mixture,	D. Irvin & Sou, Odersburg,	8.86
357	†Special Potato Manure,	Elmer Eaby, Lititz,	7.14
168		Titus C. Bachman, Hellerton,	
476		F. L. Van Orman, LeRaysville,	
356	Thomas' Scientific Tobaco Grower,	Elmer Eaby, Lititz,	8.12
985	†Thomas' Wheat and Corn Fertilizer,	Elmer Leaman, Ronks,	9.15
850		W. J. Moyer, Greenville,	
1019		John T. Davis, St. Johns,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen. in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
8.36	8.00	.78	9.14	8.50	2.00	-------	2.00	2.00	.92	.82	19.45	17.50	1268
7.40	‡7.00	4.31	11.71	-------	9.56	-------	*9.56	10.00	2.38	2.47	35.22	29.25	121
*7.35	8.00	.49	*7.84	9.00	3.15	-------	3.15	3.00	8.48	.41	17.24	20.00	1251
6.67	6.00	.32	6.99	7.00	10.17	-------	10.17	10.00	*3.07	3.29	35.64	30.00	392
7.28	7.00	.50	*7.78	8.00	3.34	-------	*3.34	5.00	*3.79	4.12	32.84	31.50	1278
7.88	8.00	.55	*8.43	9.00	5.01	-------	5.01	5.00	1.65	1.65	25.35	21.00	973
9.39	-------	7.84	17.23	16.00	3.07	-------	3.07	3.00	4.85	4.75	42.98	34.30	1831
8.46	8.00	.99	9.45	9.00	2.84	-------	*2.84	5.00	*2.18	2.50	26.43	31.00	1826
8.29	8.00	.98	9.27	9.00	4.40	-------	4.40	4.00	1.54	1.65	24.91	[24.00 [21.75 [27.00	1378 1322 1433
5.86	6.00	.34	*6.20	7.00	9.45	-------	*9.45	10.00	*2.22	2.47	30.20	27.00	393
8.88	8.00	1.86	10.74	9.00	6.29	-------	*6.29	7.00	*2.87	3.29	34.03	36.00	1440
9.18	8.00	.70	9.88	9.00	2.22	-------	2.22	2.00	1.05	.82	21.15	[23.00 [20.00	1439 1683
8.56	8.00	.62	9.18	9.00	6.98	-------	6.98	7.00	1.49	1.65	27.44	[26.00 [27.40	1780 1832
4.96	5.00	.27	*5.23	6.00	11.15	-------	11.15	10.00	*.56	.82	23.50	[23.00 [27.50	553 854
9.15	8.00	.60	9.75	9.00	1.98	-------	1.98	2.00	1.65	1.65	23.59	[20.50 [24.00 [25.00	1319 555 1437
8.47	8.00	.66	9.13	9.00	3.86	-------	3.86	4.00	.93	.82	21.64	[16.75 [20.50 [19.00	391 162 548
8.02	8.00	1.47	9.49	9.00	2.38	-------	2.38	2.00	1.61	1.65	23.05	[21.00 [23.00	552 798
8.09	8.00	.63	*8.72	9.00	10.18	-------	10.18	10.00	1.58	1.65	30.66	[------ [32.00	974 1679
7.87	8.00	.96	8.83	9.00	10.08	-------	10.08	10.00	1.58	1.65	30.52	[27.00 [30.00	780 1643
8.13	8.00	.73	8.86	9.00	1.17	-------	1.17	1.00	.87	.82	18.08	16.00	1644
*7.74	8.00	1.44	9.18	9.00	4.11	-------	4.11	4.00	.86	.82	21.07	[20.00 [19.00	762 1223
*9.65	10.00	.76	*10.41	11.00	14.22	-------	*14.22	15.00	.81	.82	32.73	31.00	781
7.94	8.00	1.39	9.33	9.00	6.05	-------	6.05	6.00	.97	.82	23.68	[22.50 [20.00	761 779
9.01	8.50	.59	9.60	9.50	2.50	-------	2.50	1.50	*.89	1.00	20.53	[------ [23.00	167 563
9.68	9.00	1.17	10.85	10.00	6.10	-------	6.10	6.00	1.77	1.65	28.95	[28.00 [24.50 [27.00	853 686 1335
*9.73	10.00	1.26	10.99	11.00	8.30	-------	*8.30	10.00	.47	-------	25.47	21.50	1606
*6.71	7.00	1.39	8.10	8.00	9.62	-------	*9.62	10.00	1.79	1.65	29.91	[27.50 [------ [25.50	357 163 476
8.76	8.00	1.52	10.28	9.00	2.40	3.46	5.86	6.00	2.59	2.50	32.74	29.50	356
9.17	9.00	.91	10.08	10.00	3.36	-------	3.36	3.00	.98	.83	22.20	[20.00 [22.00 [22.00	985 850 1019

*Constituent falls below guaranty. ‡Guaranteed soluble only.

Sample number	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
198	†Victor Potash Manure,	H. L. Hoffman, Enola,	9.47
103		O. H. Cressman, Allentown, R. D. 4,	
475		F. L. Van Orman, LeRaysville,	
	JAMES THOMAS, WILLIAMSPORT, PA.		
1533	†Thomas' Klondike Brand Phosphate,	John Watt, Bellville,	7.83
1407		T. S. Green, Canton,	
1596		Keystone Hdw. Co., Reynoldsville,	
128	†Thomas' Potato and Truck Manure,	Smith Bros. Co., Ridgway,	8.37
1531		John Watt, Bellville,	
1532	†Thomas' Standard Brand Phosphate,	John Watt, Belleville,	7.94
1406		T. S. Green, Canton,	
1595		Keystone Hdw. Co., Reynoldsville,	
	TRENTON BONE FERTILIZER CO., TRENTON, N. J.		
808	Trenton Corn Mixture,	L. A. Howells, Morrisville,	6.73
805	Trenton High Grade Potato Fertilizer,	L. A. Howells, Morrisville,	9.07
806	Trenton Keystone Potato Manure,	L. A. Howells, Morrisville,	8.44
807	Trenton Special Corn Manure,	L. A. Howells, Morrisville,	7.30
	JACOB J. TRINLEY & SONS, LINFIELD, PENNA.		
1385	Ravene Phosphate for All Crops,	Isaac A. Hartman, Anselma,	7.62
	F. W. TUNNELL & COMPANY, INC., PHILADELPHIA, PA.		
332	†Ammoniated Phosphate and Potash,	Richard B. Jackson, Cochranville,	5.19
437		W. M. Gehman, Macungie,	
817	Empire Potato Manure,	John B. Satterthwaite, Woodbourne	11.99
829	†No. 1 Special High Grade Potato Mixture,	H. A. Mendenhall, Toughkenamon,	9.47
433		W. M. Gehman, Macungie,	
1367		Malvern Farm Supply Co., Malvern,	
434	†Potato and Grain Manure,	W. M. Gehman, Macungie,	12.15
830		H. A. Mendenhall, Toughkenamon,	
795	†Raw and Acidulated Animal Compound,	John C. Rhodes, Newton Square,	9.02
992		H. C. Breckbill, Strasburg,	
794	Royal Fish Guano,	John C. Rhodes, Newton Square,	10.97
1617	Special High Grade Potato Manure,	Carl Nicholas, Sebring,	12.03
331	†Sweet and White Potato Manure,	Richard B. Jackson, Cochranville,	12.18
1024		Frank Rubert, Cressona,	
	TUSCARORA FERTILIZER CO., BALTIMORE, MD.		
283	†Fruit and Potato,	Frederick & Inks, Fairchance,	9.18
892		Frank Geist (not an agent), Northumberland, R. D.	
284	York State Special,	Frederick & Inks, Fairchance,	7.81
	J. E. TYGERT CO., THE, PHILADELPHIA, PA. BY A. A. C. CO., N. Y.		
1158	Early Truck Guano,	Geo. S. Miller, Mifflinville,	10.76
1160	Gold Edge Potato Guano,	Geo. S. Miller, Mifflinville,	12.72
161	†Golden Harvesst Phosphate,	Lovine Lerch, Bethlehem, R. F. D. 1	11.26
1156		Geo. S. Miller, Mifflinville,	
1159	Potato Fertilizer,	Geo. S. Miller, Mifflinville,	10.84
797	Standard Fertilizer,	Edward Shallcross, Bustleton,	12.48
1157	Ten Per Cent. Grain Grower,	Geo. S. Miller, Mifflinville,	10.63
796	Potato Special,	Edward Shallcross, Bustleton,	10.29

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen. in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
7.85	8.00	1.28	9.13	9.00	5.25	-------	5.25	5.00	1.10	.83	23.40	------ 20.00 19.50	198 109 475
9.62	9.00	.73	10.35	10.00	3.48	-------	3.48	3.00	.90	.82	22.23	22.00 22.00 24.00	1533 1407 1596
*7.52	8.00	1.39	8.92	9.00	5.08	-------	5.08	5.00	1.60	1.65	25.23	33.00 30.00	129 1531
*7.70	8.00	.78	*8.48	9.00	1.46	-------	1.46	1.60	.87	.82	18.00	20.00 20.00 22.00	1532 1406 1593
8.79	7.00	.54	9.33	-------	3.23	-------	3.23	3.00	1.71	1.65	24.70	28.00	808
6.15	6.00	.98	7.13	-------	9.87	-------	9.87	10.00	*2.52	3.29	32.66	36.00	805
7.96	8.00	.71	8.67	-------	10.15	-------	10.15	10.00	1.96	1.65	32.08	31.00	806
8.37	8.00	.59	8.96	-------	3.53	-------	3.53	3.00	2.02	1.65	25.95	26.00	8.07
*8.69	9.00	.87	*9.60	10.00	3.61	-------	3.61	3.00	1.06	1.23	22.20	22.00	1385
7.50	7.00	1.02	8.52	8.00	1.95	-------	1.95	2.00	.51	.21	14.43	19.00 19.00	332 437
5.89	6.00	1.01	6.90	7.00	12.07	------	12.07	10.00	*2.57	3.29	34.77	32.00	817
8.11	8.00	.60	8.71	9.00	10.89	-------	10.89	10.00	2.54	2.47	35.71	32.50 31.50 33.00	829 433 1367
7.60	7.00	.66	8.26	8.00	6.77	-------	6.77	4.00	1.65	1.65	26.88	25.00 26.50	434 830
10.84	10.00	6.03	*16.87	20.00	2.03	-------	2.03	-------	*1.05	1.65	21.27	27.00 27.00	795 992
7.23	7.00	.65	7.88	8.00	5.06	-------	5.06	3.00	2.33	1.85	27.97	28.50	791
6.27	6.00	1.06	7.33	7.00	10.29	-------	10.29	10.00	2.54	2.47	33.48	31.60	1617
7.45	7.00	.98	8.43	8.00	8.01	-------	8.01	8.00	*1.34	1.65	26.77	30.00 30.00	331 1024
8.06	8.00	.85	8.91	8.50	10.02	-------	10.02	10.00	1.68	1.65	30.97	33.00 26.00	283 892
*7.71	8.00	1.21	8.92	8.50	4.25	-------	4.25	4.00	.90	.82	21.27	24.00	284
6.43	6.00	1.77	7.60	7.00	2.96	-------	2.96	2.00	3.13	3.29	28.90	28.00	1158
7.00	7.00	1.07	8.07	8.00	5.06	-------	5.06	5.00	1.56	1.65	24.26	24.50	1160
*6.94	8.00	2.72	9.66	9.00	2.85	-------	2.85	2.00	.64	.41	18.66	16.00 18.50	161 1156
6.47	6.00	1.75	8.22	7.00	6.22	-------	6.22	5.00	.88	.82	22.24	21.50	1159
8.02	8.00	1.86	9.88	9.00	2.17	-------	2.17	2.00	1.69	1.65	23.49	27.00	797
7.62	7.00	.98	8.60	8.00	9.60	-------	*9.60	10.00	1.04	1.23	27.21	28.00	1157
7.29	7.00	.94	8.23	8.00	9.94	-------	9.94	10.00	2.88	2.47	35.68	35.00	796

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	UNION CHEMICAL WORKS, INC., NORTH WALES, PA.		
1758	High Grade Vegetable Guano,	Henry K. Nohr, Quakertown,	7.37
113	†Ideal Potato Manure, Planting Brand,	H. D. Sittler, Trexlertown,	9.34
191		N. W. Stroup, Elizabethville,	
1759	†Potato and Celery Special,	Henry K. Mohr, Quakertown,	9.77
1775		Christian Kreider, Myerstown,	
	UNITED STATES FERTILIZER CO., BALTIMORE, MD.		
27	†Farm Bell Animal Ammoniated,	J. N. Getz Co., Lock Haven,	7.05
227		J. Chester Bell, Gettysburg, R. D. 2,	
245		Biglerville Warehouse, Biglerville,	
25	†Farm Bell Fruit and Potato Guano,	J. N. Getz, Lock Haven,	7.74
446		Henry P. Brown, Laurys,	
1310	†Farm Bell Pennant Winner,	J. M. Bartenslager, Stewartstown,	8.39
1895		J. J. Shoemaker, Walnutport,	
1573	Farm Bell Potato and Tobacco Guano,	Fred Seely, Beach Haven,	6.97
226	Farm Bell Standard Guano,	J. Chester Bell, Gettysburg, R. D. 12.	4.39
445	Farm Bell Trucker's Favorite 4-6-8,	Henry P. Brown, Laurys,	7.29
444	†Farm Bell Wheat, Oat, Corn Special, 1-8-6.	Henry P. Brown,	6.06
684		A. L. Grove, Mifflinburg,	
	VIRGINIA CAROLINA CHEMICAL CO., FOR RESALE BY RASIN MONUMENTAL CO., BALTIMORE, MD.		
1594	V. C. C. Co.s Fish, Bone and Potash,	N. H. Diemer, Brookville,	10.11
693	†V. C. C. Co.'s National Ammoniated Guano.	J. R. Weaver & Bro., New Oxford,	11.80
1240		Isaac Kunkle, Winfield, R. F. D.,	
1592		N. H. Diener, Brookville,	
1241	V. C. C. Co.'s Prize Potato Manure,	J. R. Weaver & Bro., New Oxford,	9.22
1591	†V. C. C. Co.'s Standard Corn and Grain Grower.	N. H. Diener, Brookville,	8.45
1685		McCalmont & Co., Belefonte,	
	JOS. C. WALKER & SONS CO., GAP, PA.		
981	Pride of Pequa High Grade,	Jos. C. Walker & Sons Co., Gap,	6.27
982	Pride of Pequa,	Jos. C. Walker & Sons Co., Gap,	9.89
	W. E. WHANN CO., PHILADELPHIA, PA., BY A. A. C. CO., NEW YORK.		
1762	Whann's Chester Valley Economist Fert.,	Milton Johnson, Quakertown,	11.06
440	Whann's Chester Valley 15% Guano,	Allen M. Gehman, Macungie,	9.62
800	Whann's Chester Valley Special Potato and Truck Fertilizer.	J. A. Gill, Richboro,	9.76
439	Whann's Chester Valley 10% Potato Manure.	Allen M. Gehman, Macungie,	8.94
	ROBERT A. WOOLDRIDGE, TRADING AS THE WOOLDRIDGE FERTILIZER CO., BALTIMORE, MD.		
744	†Tiger Phosphate,	S. B. Jackson, Carlisle,	7.86
1338		Grant Johnson, Millville,	
	ROBERT A. WOOLDRIDGE CO., BALTIMORE, MD.		
694	†Wooldridge's Triumph Brand Phosphate,	Bennage & Dersham, White Deer,	10.57
307		F. G. Evans, Kelton,	
1295		Geo. B. Murphy, Red Lion,	
746	†Wooldridge's Champion Giant Phosphate,	S. B. Jackson, Carlisle,	11.12
696		Bennage & Dersham, White Deer,	
1814		S. S. Sheeler, Duncannon,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen. in 100 lbs.				
Total.			Available.				Total.						
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
7.72	7.00	.73	8.45	8.00	7.35	-------	7.35	7.00	3.46	3.28	35.90	35.00	1758
8.52	8.00	.11	*8.63	9.00	6.53	3.21	*9.74	10.00	*3.06	3.28	37.80	42.00	113
												------	191
7.49	7.00	.26	*7.75	8.00	7.33	2.51	9.84	10.00	1.61	1.65	30.13	23.75	1759
												27.50	1775
8.16	8.00	1.11	9.27	9.00	6.43	-------	6.43	5.00	1.54	1.65	24.85	27.00	27
												23.50	227
												27.50	245
8.33	8.00	.94	9.27	9.00	9.93	-------	9.93	10.00	1.73	1.65	31.41	32.00	25
8.47	8.00	.73	9.20	9.00	4.59	-------	4.59	4.00	.95	.82	22.40	26.35	440
												20.00	1310
7.72	7.00	.94	8.66	8.00	9.67	-------	*9.67	10.00	*1.78	2.46	30.76	20.30	1895
7.51	8.00	1.44	8.95	9.00	3.25	-------	3.25	2.00	1.73	1.65	24.04	30.00	1573
6.89	6.00	.92	7.81	7.00	7.77	-------	*7.77	8.00	*3.02	3.28	33.46	20.00	226
8.27	8.00	.51	*8.78	9.00	6.53	-------	6.53	6.00	.91	.82	23.90	30.00	445
												19.95	444
												------	684
8.12	8.00	3.07	11.19	9.00	3.70	-------	3.70	3.00	*1.32	1.65	23.89	22.50	1594
												------	693
*7.08	8.00	3.25	10.33	9.00	4.01	-------	4.01	4.00	.83	.82	21.17	18.50	1240
												21.00	1592
6.77	6.00	2.55	9.32	7.00	4.40	.47	*4.87	6.00	*1.38	1.65	29.68	22.50	1241
8.46	8.00	1.61	10.07	9.00	1.94	-------	1.94	2.00	.43	.41	15.10	18.00	1591
												20.00	1685
6.89	7.00	.82	7.71	-------	2.66	5.20	7.86	8.00	2.53	2.47	32.71	29.00	981
10.44	10.00	.78	11.22	-------	3.49	-------	3.49	3.00	2.56	2.47	30.62	25.00	982
8.23	8.00	.73	8.96	9.00	2.25	-------	2.25	2.00	.50	.41	17.72	19.00	1762
7.44	7.00	.81	8.25	8.00	13.75	-------	*13.75	15.00	1.46	.82	33.02	30.00	440
7.54	7.00	.85	8.39	8.00	7.33	-------	7.33	7.00	2.47	2.47	31.18	-------	800
7.36	6.00	.65	8.01	7.00	9.77	-------	*9.77	10.00	*2.38	3.29	33.10	34.50	439
8.19	8.00	.66	8.85	8.50	5.13	-------	5.13	4.50	1.24	1.03	24.03	22.50	744
												21.00	1338
8.64	8.00	1.58	10.22	9.00	4.36	-------	4.36	4.00	1.06	1.23	23.17	22.00	694
												24.00	307
												20.00	1295
8.92	9.00	1.25	10.17	10.00	2.08	-------	2.08	2.00	1.05	.82	21.02	19.75	745
												19.00	696
												22.00	1814

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
937	Wooldridge's Farmer's Favorite Cereal Compound.	Grant Wiggins, New Providence, R. D.	10.75
219	†Wooldridge's Fernwood Grange Mixture	A. M. Brandt & Son, Dillsburg,	11.42
70		J. G. Sully, Richfield,	
366		F. G. Evans, Kelton,	
695	†Wooldridge's Special Potato and Tobacco Fertilizer.	Bennage & Dersham, White Deer,	9.76
746		S. B. Jackson, Carlisle,	
	YORK CHEMICAL WORKS, YORK, PA.		
1646	Dempwolf's Crop Grower,	A. C. Fendricks, Mercersburg,	10.33
1230	Dempwolf's Golden Sheaf,	D. E. Brandt, East Berlin,	10.85
1361	†Dempwolf's Potato and Truck Special,	G. O. Fenstermacher, Tamaqua,	7.89
1233		H. M. Berkheimer, Abbottstown,	
1459		Hershey Store Co., Hershey,	
648	†Dempwolf's Harvest Queen,	Chas. Edelman, Bath,	12.39
199		A. C. Rutter, Halifax,	
903		E. D. Dewksburg, Catawissa, R. D. 5	
1839	Dempwolf's Plow Brand,	Kirkland & Wright, Girard,	13.22
1258	†Dempwolf's Potato Manure,	M. J. Sheffer, Hanover,	10.35
646		Chas. Edelman, Bath,	
1359		G. O. Fenstermacher, Tamaqua, R. D.	
337	†Dempwolf's Special Tobacco,	Holmes Seed Co., Harrisburg,	6.28
1360		G. O. Fenstermacher, Tamaqua, R. D. 5.	
993	†Dempwolf's Standard Potash,	W. K. Bender, Strasburg,	11.54
647		Chas. Edelman, Bath,	
1043		J. H. Edmiston, Petersburg,	
	HENRY S. ZOOK, ELVERSON, PENNA.		
1662	No. 7 Pride of Chester Wheat, Corn and Potato Phosphate.	Chas. Geiger (purchased from factory for own use), Scarlett Mill,	10.84

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen. in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Total.		Insoluble.	Available.		Present as muriate.	Present as sulphate.	Total.						
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.	Found.	Guaranteed.			
7.40	7.00	.80	8.20	8.00	2.27	-------	2.27	2.00	.74	.41	18.04	17.50	937
8.19	8.00	1.43	9.62	9.00	8.24	-------	8.24	8.00	1.76	1.65	29.83	{27.00 26.00	219 70 306
8.81	9.00	1.24	10.05	10.00	5.14	-------	5.14	5.00	1.84	1.65	27.67	24.00 26.00	695 746
9.21	8.00	.54	9.75	8.50	1.35	-------	1.35	1.00	.76	.82	18.85	16.00	1646
7.84	8.00	1.90	9.74	8.50	2.61	-------	2.61	2.00	.45	.29	18.02	15.00	1230
8.78	8.00	.92	9.70	9.00	4.00	3.02	7.02	7.00	2.72	2.47	33.98	{30.00 31.00 34.00	1361 1233 1459
8.28	8.00	1.13	9.41	8.50	2.32	-------	2.32	2.00	.87	.82	19.59	{18.40 17.50 18.00	648 199 903
8.24	8.00	1.07	9.31	9.00	2.58	-------	2.58	2.00	1.65	1.65	23.49	23.00	1839
7.05	6.00	1.05	8.10	6.50	6.96	-------	6.96	7.00	.81	.82	22.83	{24.00 22.00 22.00	1258 646 1359
5.87	5.00	.74	6.61	5.50	6.66	3.51	10.17	10.00	*3.09	3.29	36.06	{------- 36.00	337 1360
7.85	8.00	1.09	8.94	8.50	5.38	-------	5.38	4.00	.88	.82	22.54	{22.00 24.00 20.25	993 647 1043
8.37	8.00	1.82	10.19	9.00	5.36	-------	*5.36	6.00	*1.27	1.65	24.99	26.50	1662

*Constituent falls below guaranty.

ROCK AND POTASH

Furnishing Phosphoric

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	ALLENTOWN MANUFACTURING CO., ALLENTOWN, PA.		
634	High Grade Phosphate and Potash,	Mr. Fenstermaker, Allentown,	10.76
	AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK.		
123	†Big Crop Phosphate,	W. D. Gates, Curwensville,	9.71
81		S. O. Wright, Zelienople,	
362		C. B. Goehenour, Lititz,	
640	Gem Alkaline Phosphate,	John Anthna, Bath, R. D.,	7.17
457	†High Grade Phosphate and Potash,	J. P. Griffith & Son, Nichols, N. Y.	10.39
112		J. H. Geisler, Trexlertown,	
645		T. M. Kunkel, Bath,	
512	†High Grade Potash Mixture,	A. Skelly, Ehensburg,	9.40
458		J. P. Griffith & Son, Nichols, N. Y.	
590		O. P. Beebe, Montrose,	
1	Reese's Wheat Special,	Harry Keefer, Pine Grove, R. D.,	10.79
1444	†Bradley's Alkaline Phosphate & Potash,	Geo. R. Andrews, Enon Valley,	7.63
1578		John Shaffer, Knox,	
580	Croeker's Alkaline Bone and Potash,‡	J. A. Williams, Friendsville,	11.58
92	†Croeker's Dissolved Phosphate & Potash,	W. H. Kaufman, Harmony,	11.56
847		L. P. Armer, Orangeville, O.,	
1867	Maryland Linden Superphosphate,	S. M. Shuler & Son, Liverpool,	9.51
1961	Maryland Tornado Fertilizer,	L. R. Over, Curryville,	9.01
1828	Michigan Carbon Works Red Line Phosphate with Potash.	Biehel Bros., Kearsarge,	11.01
223	Michigan Carbon Works Wheat and Grass Fertilizer.	Wm. F. Howe, York Springs, R. D.,	9.01
844	Milsom's Dissolved Phosphate and Potash.	A. C. Lininger, Greenville,	10.93
759	Moro-Philips Alkaline Phosphate,	Niekles & Stewart, Shippenshurg,	10.33
1270	Moro-Philips Great Crop Fertilizer,	Zinn Bro., West York,	7.89
1083	Moro-Philips Wheat Special,	Kingsloe & Ewing, Newton Hamilton	10.07
632		Peter Haughenhrach, Nazareth,	
1942		H. G. Luker, Kittanning,	
101	Northwestern X. X. X. Alkaline Phosphate	J. J. Mitman, Bethlehem,	10.16
67		W. W. Shirk, Oakland Mills,	
1657		Wm. Zettlemoyer (pur. from factory for own use), Lenhartsville.	
495	†Northwestern Dissolved Phosphate and Potash.	I. M. Sheets, Sunbury R. D. 3,	10.13
641		James Spengler, Bath,	
1584	Quinniapiaek Dissolved Phosphate and Potash.	Farmers' Hdw. Co., Shippensvile,	8.82
1572	Read's High Grade Special,	Elliott Hill, Beach Haven,	8.93
1353	†Sharpless & Carpenter's Soluble Phosphate and Potash.	Jonas Kunkle, New Ringgold, R. D.	11.48
1383		Wm. J. Davis, Lionville,	
769	†Susquehanna High Grade Phosphate and Potash.	Percy Harman, Mt. Holly,	9.79
201		P. A. Enders, Halifax, R. No. 1,	
1209		A. A. Miller, Somerset, R. F. D. 4,	
1400	†William's & Clark's Dissolved Phosphate and Potash.	Thos. Crayton, Leroy,	10.65
326		A. Steen & Co., Elwyn,	
194		McConnell & Watterson Co., Kittanning.	
540	†Zell's Electric Phosphate,	Chas. H. Kistler, Slatington, R.D. 2	.39
55		W. B. Shirk, Oakland Mills,	
1794		B. F. Horting, Newport,	

†Composite sample. ‡No Bone present.

FERTILIZERS.

Acid and Potash.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.						
Available.			Total.				Total.				
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
12.79	12.00	.60	13.39	13.00	5.76	.....	*5.76	6.00	19.70	19.00	634
8.00	8.00	1.20	9.28	9.00	5.11	.....	5.11	5.00	15.87	22.00	123
										22.00	81
										17.00	362
6.93	7.00	.93	7.86	6.00	3.32	.....	3.32	3.00	15.30	.....	6.40
11.92	12.00	.77	*12.69	13.00	5.57	.....	5.57	5.00	18.92	18.85	457
										18.00	112
										22.00	645
10.24	10.00	.65	10.89	11.00	10.02	.....	10.02	10.00	22.22	22.00	512
										21.70	458
										23.00	590
10.49	10.00	.54	11.03	11.00	2.42	.....	2.42	2.00	14.41	15.00	1
10.07	10.00	1.71	11.78	11.00	2.34	.....	2.34	2.00	14.68	16.15	1444
										18.00	1578
12.13	12.00	.42	*12.55	13.00	5.02	.....	5.02	5.00	18.39	18.00	580
9.98	10.00	1.75	11.73	11.00	1.93	.....	1.98	2.00	14.28	16.00	92
										.....	847
11.13	11.00	.77	11.90	12.00	2.51	.....	2.51	2.00	15.30	15.00	1867
12.02	12.00	.79	12.81	13.00	5.61	.....	5.61	5.00	19.04	18.00	1961
9.87	10.00	1.72	11.59	11.00	4.90	.....	4.90	2.00	17.11	17.00	1828
8.42	8.00	.75	9.17	9.00	5.06	.....	5.06	5.00	15.87	15.00	223
9.83	10.00	2.45	12.28	11.00	2.92	.....	2.92	2.00	15.34	16.00	844
10.20	10.00	.70	10.90	11.00	1.99	.....	1.99	2.00	14.04	14.50	759
8.48	8.00	.79	9.27	9.00	5.16	.....	5.16	5.00	16.06	15.25	1270
										15.75	1083
10.61	10.00	.74	11.35	11.00	2.29	.....	2.29	2.00	14.66	.....	632
										22.00	1942
										.....	101
10.42	10.00	.61	11.03	11.00	5.14	.....	5.14	5.00	17.40	.....	67
										14.60	1657
9.91	10.00	.84	*10.75	11.00	2.39	.....	2.39	2.00	17.26	15.00	495
										14.00	641
10.35	10.00	2.18	12.53	11.00	2.08	.....	2.08	2.00	14.79	15.00	1584
12.19	12.00	.84	13.03	13.00	4.75	.....	*4.75	5.00	18.34	17.00	1572
10.98	10.00	.57	11.55	11.00	2.23	.....	2.23	2.00	14.82	14.00	1353
										16.00	1383
										18.50	769
12.44	12.00	.66	13.10	13.00	5.29	.....	5.29	5.00	19.02	.....	201
										18.00	1209
										14.25	1400
10.16	10.00	.87	11.03	11.00	2.38	.....	2.38	2.00	14.79	16.00	326
										20.00	1941
										16.00	540
10.32	10.00	.87	11.19	11.00	2.38	.....	2.38	2.00	14.61	14.50	55
										12.50	1794

*Constituent falls below guaranty.

Sample number.	Manufaeturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	AMERICAN FERTILIZING CO., BALTIMORE, MD.		
406	†Dissolved Phosphate and Potash,	Jones Eavenson, Christiana,	10.89
1227		A. F. Brown, East Berlin,	
1550	†American Special Potash Mixture,	J. H. Neidigh, State College,	8.84
1636		J. W. Glatfelter, Rossville,	
792	Ameriean Speeial Superphosphate,	George Watson, Embreesville,	6.81
	ARMOUR FERTILIZER WORKS, BALTIMORE, MD.		
461		Lott Shoemaker, Nichols, N. Y.,	
142	†Banner Brand,	Albee & Sultz, Port Allegany,	8.92
607		Sewel Bowser, Alum Bank,	
462		Lott Shoemaker, Nichols, N. Y.,	
129	†Phosphate and Potash No. 1,	C. O. Salberg, Ridgeway,	8.24
666		Wm. Wood, Oseeola Mills,	
660		Wm. Wood, Oseeola Mills,	
141	Potash Mixture,	Albee & Sultz, Port Allegany,	7.28
872		Louck's Hardware Co., Scottdale,	
868		Louck's Hardware Co., Scottdale,	
37	†Sure Crop,	S. G. Updegraff, Williamsport,	9.02
980		Jos. C. Walker & Sons Co., Gap,	
	ATLANTIC FERTILIZER CO., BALTIMORE, MD.		
1931	High Grade Potash Compound,	S. J. Sider, Blaekliek,	9.38
1263	Jumbo Crop Grower,	H. H. Loose, Menges Mills,	8.19
	BALTIMORE PULVERIZING CO., BALTIMORE, MD.		
952	†Corn and Grain Grower,	E. B. Fritz & Son, Quarryville,	8.37
1222		J. D. Goehenour, Dillsburg,	
	BALTIMORE FERTILIZER CO., BALTIMORE, MD.		
951	Special Spring and Fall Mixture,	E. B. Fritz & Son, Quarryville,	5.08
229	Honest 8 and 3,	I. N. Lightner, Gettysburg,	8.76
	BAUGH & SONS CO., PHILADELPHIA, PA.		
1261		M. J. Sheffer, Hanover,	
764	†Baugh's 8 and 5 Speeial Alkaline,	S. E. Shenk, Newville,	7.56
1870		Long & Miller, Liverpool,	
765		S. E. Shenk, Newville,	
622	†Baugh's Soluble Alkaline Superphosphate,	D. C. Kert & Son, Orbisonia,	8.34
767		John A. Miller, Oakville,	
	BOWKER FERTILIZER CO., NEW YORK, N. Y.		
1521	Bowker's Empire State Phosphate and Potash.	C. F. Craig, Sligo,	4.60
1129	†Bowker's Golden Harvest Fertilizer,	E. R. Thomas, Springville,	11.40
1559		H. B. Harned, Caverton,	
1191	Bowker's Superphosphate with Potash,	Murray & Co., Honesdale,	13.22
20	Bowker's Superphosphate with Potash for Grass and Grain.	George Maurer, Pitman,	10.24
	BUFFALO FERTILIZER CO., BUFFALO, N. Y.		
1576		R. C. Bower, Beaeh Haven,	
1507	†General Crop,	The Bennett Hdw. Co., Emlenton,	7.93
1612		Snyder Bros., Liberty,	

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Insoluble.	Total.				Total.				
Found.	Guaranteed.		Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.			
10.29	10.00	1.25	11.54	11.00	2.38	.....	2.38	2.00	14.72	13.00	406
										13.25	1227
7.87	8.00	.93	*8.80	9.00	3.92	.....	3.92	4.00	14.38	15.00	1550
										17.00	1636
6.92	6.00	.59	7.51	7.00	2.97	.....	2.97	3.00	12.60	14.00	792
										21.00	461
10.22	10.00	.62	10.84	10.50	8.16	.....	8.16	8.00	20.31	24.00	142
										19.50	607
										17.00	462
10.10	10.00	.74	10.84	10.50	2.36	.....	2.36	2.00	14.98	18.00	129
										20.00	666
										18.00	669
6.15	6.00	.54	6.69	6.50	2.91	.....	2.91	3.00	12.00	16.00	141
										17.00	872
										20.00	868
8.17	8.00	.56	8.73	8.50	5.08	.....	5.08	5.00	15.72	20.00	37
										16.00	980
*10.63	12.00	.73	*11.36	13.00	4.94	.....	4.94	5.00	17.36	20.00	1931
7.84	8.00	.42	*8.26	9.00	5.32	.....	5.32	5.00	15.61	16.50	1263
9.56	10.00	1.45	11.01	.....	2.94	.....	2.94	2.25	14.82	15.50	952
										15.50	1222
*7.62	8.00	1.07	8.69	.....	1.89	.....	1.89	1.25	12.21	13.50	951
8.66	8.00	.88	9.54	9.00	3.51	.....	3.51	3.00	14.53	16.00	229
										15.00	1261
8.51	8.00	.57	9.08	.....	5.50	.....	5.50	5.00	16.35	15.00	764
										15.50	1870
										14.00	765
10.24	10.00	.52	10.76	.....	2.18	.....	2.18	2.00	14.20	16.50	622
										15.00	767
8.27	8.00	.88	9.15	9.00	3.32	.....	3.32	3.00	14.06	18.00	1521
12.39	12.00	1.01	13.40	13.00	4.85	.....	4.85	5.00	18.63	19.50	1129
										21.00	1559
10.28	10.00	3.25	13.53	11.00	1.01	.....	1.01	1.00	14.01	15.00	1191
10.67	10.00	.74	11.41	11.00	2.10	.....	2.10	2.00	14.49	16.00	20
9.24	9.00	1.66	10.90	10.00	3.11	.....	3.11	3.00	14.83	16.00	1576
										22.00	1507
										15.00	1612

*Constituent falls below guaranty.

Sample number.	Manufaeturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	CENTRAL CHEMICAL CO., HAGERSTOWN, MD.		
1671	C. C. C. Great Southern,	D. O. Nieodemus, Zullingniger,	7.83
768		John K. Beidler & Son, Oakville,	
750	Majestie,	J. S. Craig, Shippensburg,	6.49
1673		Sollenberger & Croft, Fayetteville,	
	CHESAPEAKE CHEMICAL CO., BALTIMORE, MD.		
929	C. C. Co.'s Celebrated Mixture,	New Providenee Coai Co., New Providenee.	11.46
252	C. C. Co.'s Reliable Phosphate,	Aspers Milling and Produee Co., Aspers.	10.29
	COLUMBIA GUANO CO., BALTIMORE, MD.		
1055	Columbia Double Ten Potash Mixture,	James Miller, Montgomery,	11.07
1388	†Columbia Grass and Grain Grower,	E. L. Shepard, New Albany,	7.39
1505		L. A. Geiger, Joanna,	
715	Columbia Premium Phosphate and Potash,	E. M. Twigley, Kingsley,	9.51
1387		E. L. Shepard, New Albany,	
1054	†Columbia Prize Crop Phosphate,	James Miller, Montgomery,	8.17
1501		L. A. Geiger, Joanna,	
	COE-MORTIMER CO., NEW YORK, N. Y.		
1136	†E. Frank Coe's High Grade Dissolved Phos-	C. B. Easterbrook, Rummersfield,	
1173	phate and Potash.	Everitt Berthamew, Saylorsburg, R. F. D. 2.	11.13
471	E. Frank Coe's Golden Harvest,	C. B. Easterbrook, Rummersfield,	10.74
	JOSIAH COPE & CO., Baltimore, MD.		
401	†Josiah Cope & Co. Soluble Phosphate and	Jonas Eavenson, Christiana,	11.23
790	Potash.	George Watson, Embreeville,	
1039		J. C. Henderson, Petersburg,	
405	†Josiah Cope & Co. High Grade Phosphate	Jones Eavenson, Christiana,	8.67
1725	and Potash.	J. H. Hershberger, Everett,	
	JAMES G. DOWNWARD CO., COATESVILLE, PA.		
940	Soluble Phosphate and Potash,	Michael Scott, Quarryville, R. D. 4,	10.89
	AMOS EBY & CO., LEAMAN PLACE, PA.		
925	Farmer's Mixture,	Harvey S. Eby, Refton,	10.71
924	Pequa Crop Grower,	Harvey S. Eby, Refton,	11.38
	EUREKA FERTILIZER CO., PERRYVILLE, MD.		
1169		W. F. Slagle, Bloomsburg,	
42	†Alkaline No. 2,	D. J. Shoek, Montoursville,	14.49
1864		T. W. Tressler, Wila,	
69	Alkaline No. 5,	L. Arnold Pfouts Valley,	13.09
194	†Alkaline No. 8,	L. Arnold, Liverpool,	
676		M. C. Catherman, Miimont, R. F. D.	8.77
683	Crop Grower,	Geo. W. Zimmerman, Cowan,	12.48
	W. S. FARMER & CO., BALTIMORE, MD.		
1737	Farmer & Co.'s B. & P. Phosphate,	P. J. Cover & Son, Meyerdale,	9.63

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.						
Available.			Total.				Total.				
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
14.06	10.00	.46	14.52	11.00	5.33	.....	5.33	5.00	20.14	17.00	1671
8.40	8.00	1.21	9.61	9.00	4.92	.....	*4.92	8.00	15.88	17.00	768
										.....	750
										15.00	1673
*9.59	10.00	1.66	12.25	11.00	2.32	.....	2.32	2.00	14.26	13.50	929
11.50	10.00	.99	12.49	11.00	3.78	.....	*3.78	4.00	16.92	17.00	252
13.38	10.00	.26	13.64	10.50	9.59	.....	*9.59	10.00	23.94	.....	1055
*9.70	10.00	.59	*10.29	10.50	2.30	.....	2.30	2.00	13.95	16.00	1388
										13.00	1505
*9.70	10.00	.59	*10.29	10.50	2.50	.....	*7.51	8.00	19.24	.....	715
										18.00	1387
8.36	8.00	.48	8.84	8.50	5.11	.....	5.11	5.00	15.80	.....	1054
										15.00	1501
8.10	8.00	1.30	9.40	9.00	5.07	.....	5.07	5.00	15.85	14.00	1136
10.36	10.00	.94	11.30	11.00	7.77	.....	*7.77	8.00	20.11	16.50	1173
										17.25	471
10.15	10.00	1.13	11.28	11.00	2.24	.....	2.24	2.00	14.42	14.00	401
										15.00	790
10.24	10.00	.51	*10.75	11.00	5.45	.....	5.45	5.00	17.52	17.00	1039
										17.00	405
										20.00	1725
*8.69	9.00	.56	*9.25	10.00	3.46	.....	*3.46	4.00	17.00	17.00	940
11.44	10.00	.80	12.24	11.00	5.08	.....	5.08	5.00	18.14	17.00	925
11.56	10.00	.83	12.39	11.00	6.43	.....	*6.43	7.00	19.60	18.00	924
11.02	10.00	1.16	12.18	11.00	2.81	.....	2.81	2.00	15.63	15.00	1169
										15.50	42
12.54	12.00	1.49	14.03	13.00	5.46	.....	5.46	5.00	19.53	.....	1864
										22.00	69
8.91	8.00	1.11	10.02	9.00	10.63	.....	10.63	8.00	22.06	.....	194
										.....	676
10.88	6.00	.94	11.82	7.00	3.57	.....	3.57	3.00	16.18	.....	683
9.97	10.00	1.16	11.13	11.00	2.24	.....	2.24	2.00	15.03	20.00	1737

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	GRIFFITH & BOYD CO., BALTIMORE, MD.		
61	†Monarch Brand,	B. F. Gayman, Thompsontown,	9.18
87		Harmony Cereal Mills, Harmony,	
996	†X. X. Potash Manure,	W. C. Herr, Strasburg,	10.95
301		Passmore & Co., Nottingham,	
1631		H. W. Rehmeyer, Turnpike,	
239		H. J. Van Dyke, Gettysburg, R. D. 6.	
64	†Special Grain Grower,	B. F. Gayman, Thompsontown,	11.08
911		Wm. Champerlain, Christiana,	
	S. M. HESS & BRO., INC., PHILADELPHIA, PA.		
197	S. M. Hess & Bros. Emperor Phosphate,	Harvey Smeltzer, Milersburg, R. No. 2.	9.22
1711	S. M. Hess & Bros. Farmer's Grain and Clover Grower.	Ira Price, Everett, R. D. 5,	9.52
624	†S. M. Hess & Bros. Soluble Phosphate and Potash.	Jno. M. Bush, Shirleysburg,	11.83
339		J. B. Landis, Middletown, R. D.,	
1166		J. P. Horlacher, Beaver Valley,	
230	†S. M. Hess & Bros. Standard Alkaline,	J. S. Smith, Gettysburg, R. D. 3,	10.99
108		H. T. Troxell, Allentown, R. D. 3,	
679		J. R. Iddings, Mifflinburg, R. F. D.	
	HUBBARD FERTILIZER CO., THE, BALTIMORE, MD.		
1743	†Hubbard's Corn and Buckwheat, 6 & 3,	S. B. Alcott, Ursina,	7.44
1306		D. J. Trout, Stewartstown,	
1913		Hartley & Blaine, Turbotville,	
484	†Hubbard's Special Mixture, 10 & 4,	J. P. Hill, Muney, R. D.,	11.71
244		Biglerville Warehouse Co., Biglerville	
1745		S. B. Alcott, Ursina,	
	KEYSTONE BONE FERTILIZER CO., INC., PHILADELPHIA, PA.		
1162	Keystone 8 & 5,	J. E. Houck, Catawissa, R. D.,	6.21
	LANCASTER CHEMICAL CO., THE, LANCASTER, PA.		
50	†No. 13 Special Potash Manure,	C. S. Winey, McAllisterville,	11.44
1637		C. J. Bushey, Dillsburg,	
	LANCASTER BONE FERTILIZER CO., LANCASTER, PA.		
509	†Special Grange Mixture,	Wm. R. Rowland, Ebensburg, R. D. 2.	8.12
1902		David Sehultz, Jerseytown,	
	LISTER'S AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.		
566	†Lister's Grain and Grass Fertilizer,	Morrow & Buxton, Valencia,	9.05
503		C. F. Shaffer, Dalmatia,	
702		Calvin Deakin, Susquehanna,	
1529	†Lister's 10% Alkaline Potato Fertilizer,	J. M. Zook, Belleville,	12.12
1150		Zehner Bros., Bloomsburg,	
1804		I. B. Secrist, Millerstown,	
148	†Lister's Potash Mixture,	Sylvester Garr, Easton, R. F. D. 1,	9.51
913		B. F. Walter, Christiana,	

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.						
Available.			Total.				Total.				
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
8.15	8.00	2.51	10.66	9.00	3.34	.....	*3.34	5.00	14.59	.....	61
										17.00	87
10.06	10.00	2.28	12.34	11.00	4.46	.....	*4.46	5.00	17.00	20.00	996
										17.00	301
										15.00	1631
										15.00	239
9.87	10.00	2.03	11.90	11.00	2.48	.....	2.48	2.00	14.80	.....	64
										.....	911
10.33	10.00	.82	11.15	11.00	1.32	.....	1.32	1.00	13.47	.....	197
10.05	10.00	.98	11.07	11.00	7.66	.....	*7.66	8.00	19.80	21.50	1711
10.50	10.00	.89	11.39	11.00	2.28	.....	2.28	2.00	14.64	16.00	624
										15.00	339
										15.50	1166
8.68	8.00	.61	9.29	9.00	4.99	.....	4.99	5.00	15.98	16.00	230
										17.00	108
										16.00	679
8.27	6.00	1.44	9.71	7.00	3.25	.....	3.25	3.00	14.18	14.00	1743
										16.00	1306
										1375	1913
10.79	10.00	1.26	12.05	11.00	4.12	.....	4.12	4.00	16.82	14.25	484
										17.00	244
										18.00	1745
*7.69	8.00	.74	*8.43	9.00	5.99	.....	5.99	5.00	16.34	15.50	1162
*9.51	10.00	1.42	10.93	11.00	4.00	.....	*4.00	5.00	15.86	16.95	50
										16.00	1637
9.90	10.00	.32	*10.22	12.00	8.31	.....	8.31	8.00	20.11	22.00	509
										19.50	1902
9.24	9.00	.65	9.89	10.00	4.92	.....	4.92	5.00	16.30	25.50	566
										16.00	503
										21.00	702
8.72	8.00	.64	9.36	9.00	10.10	.....	10.10	10.00	21.21	22.00	1529
										21.00	1150
8.98	8.00	.57	9.55	9.00	7.97	.....	7.97	5.00	19.17	19.50	1804
										26.00	148
										16.00	913

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	FREDERICK LUDHAM CO., BALTIMORE, MD.		
960	Ludlam's Cecrop Fertilizer's Economy,	W. J. Hess, Quarryville,	7.13
958	†Ludlam's Cecrop Fertilizer, I. X. L. Brand.	W. J. Hess, Quarryville,	8.63
649		Geo. Rafferty, Grampian,	
1096		S. A. Hostetler, Belleville,	
	D. B. MARTIN CO., PHILADELPHIA, PA.		
4	Martin's Potash and Soluble Pbospbate No. 4.	J. K. Miller, Summit Sta.,	9.15
152	Martin's Potash and Soluble Phosphate No. 2.	Ed. Houck, Bangor,	10.85
	MILLER FERTILIZER CO., BALTIMORE, MD.		
1074	Miller's Potash Mixture,	Howard Klinger, Selinsgrove,	8.28
945	Special Alkaline,	S. M. Book & Bro., Quarryville,	6.63
	G. OBER & SONS CO., Baltimore, MD.		
1412	Ober's Big (4) Special Fertilizer,	S. J. Louther, Carroltown,	5.13
	PATAPSCO GUANO CO., BALTIMORE, MD.		
233	†Patapsco Alkaline Plant Food,	E. C. Thomas, Gettysburg,	9.31
54		W. E. Harley, Thompsontown,	
493		Walter & Frederick, Montandon,	
1237	†Patapsco Phospho Potash,	J. N. Hersh, New Oxford,	10.42
1061		G. W. Robison, Allenwood,	
1818		Jacob Fritz, New Bloomfield,	
75	Patapsco Soluble Phospbate and Potash,	G. A. Harley, Warrendale,	9.89
	J. D. PERKINS SONS, PHILADELPHIA, PA.		
826	Perkins Globe Phosphate,	Edward Tingley, New London,	8.03
	PIEDMONT MT. AIRY GUANO CO., BALMORE, MD.		
1032	Piedmont Farmer's Potash Mixture,	J. G. Simpson, Huntingdon,	7.22
1688	†Piedmont Soluble Phosphate and Potash,	J. G. Dubbs, Bellefonte,	6.79
139		A. M. Haupt, Emporium,	
1806		A. H. Ulsh, Millerstown,	
140	Piedmont Special Potash Mixture,	S. M. Haupt, Emporium,	8.73
209	Piedmont Success,	Geo. H. Hallman, Hummelstown, R. No. 1.	9.29
	RASIN MONUMENTAL CO., BALTIMORE, MD.		
1082	†Rasins' Pbosphate and Potash Fertilizer,	Isaac Shirley, McClure,	12.47
1048		Francis Archey, Penna.. Furnace,	
1153		H. D. Miller, Mifflinville,	
689	†Rasin's Wheat and Truck Mixture,	S. B. Miler, Mifflinburg, R. F. D.,	10.74
251		Aspers Milling and Produce Co., Aspers.	
1152		H. D. Miller, Mifflinville,	
	READING BONE FERTILIZER CO., READING, PA.		
691	†Economy Brand,	Joseph Lepley, Winfield, R. F. D.,	6.29
1881		A. B. Piersol, Coatesville,	
256	†Higb Grade Potash Mixture,	Grover C. Myers, Idaville,	10.23
19		Samuel Savidge, Valley View, R. F. D.	
819		H. B. Rosenberger, Doylestown,	

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.				
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.			
6.82	6.00	.60	7.42	7.00	3.04	.....	3.04	3.00	12.62	14.00	960
8.85	8.00	.62	9.47	9.00	5.01	.....	5.01	5.00	16.09	16.00	958
										18.00	649
										16.50	1096
8.15	8.00	.41	8.56	.....	4.97	.....	4.97	5.00	17.91	16.00	4
10.04	10.00	.48	10.52	.....	2.40	.....	2.40	2.00	14.23	13.00	152
9.98	10.00	.82	10.80	10.50	5.75	.....	5.75	5.00	17.76	.....	1074
7.90	8.00	.64	8.54	8.50	6.12	.....	6.12	5.00	16.56	16.00	945
*7.33	8.00	.45	*7.78	9.00	5.35	.....	5.35	4.00	15.32	17.00	1412
										16.00	233
8.52	8.00	.66	9.18	9.00	5.13	.....	5.13	5.00	16.05	.....	54
										15.00	493
										15.00	1237
6.93	6.00	.57	7.50	7.00	3.10	.....	3.10	3.00	12.78	15.00	1061
										15.00	1818
9.97	10.00	1.35	11.32	11.00	2.06	.....	2.06	2.00	14.14	25.00	75
10.38	10.00	.66	11.04	11.00	2.00	.....	2.00	2.00	14.17	17.00	826
9.30	10.00	1.52	10.82	.....	1.75	.....	*1.75	2.00	13.42	15.00	1032
										16.50	1688
*7.48	8.00	1.35	8.83	.....	2.60	.....	2.60	2.00	12.94	18.50	139
										14.00	1836
9.83	10.00	.19	10.02	.....	5.46	.....	5.46	5.00	15.16	21.00	140
8.99	9.00	.14	9.13	.....	4.45	.....	*4.45	5.00	15.48	18.00	209
										13.50	1082
10.41	10.00	1.17	11.58	11.00	2.25	.....	2.25	2.00	14.61	.....	1048
										17.00	1153
										.....	689
10.01	10.00	1.34	11.35	11.00	8.48	.....	8.48	8.00	20.77	20.00	251
										21.00	1152
6.06	6.00	.85	6.91	7.00	3.16	.....	3.16	3.00	12.28	.....	691
										15.00	1381
										22.00	256
*9.77	10.00	1.02	*10.79	11.00	9.99	.....	9.99	10.00	22.02	21.00	19
										25.50	819

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	F. S. ROYSTER GUANO CO., BALTIMORE, MD., NORTHERN DIVISION.		
147	Royster's Alkaline Phospbate,	A. W. Sanat, Martin's Creek,	6.57
860	†Royster's Bumper Crop Phosphate,	H. A. Grimm, Fairchance,	7.60
111		Bastian & Romig, Wescoesville,	
1098		M. S. Stolzfus, Belleville,	
287	†Royster's Peerless Grain and Grass Grower.	H. A. Grimm, Fairchance,	9.62
62		B. F. Gayman, Thompsontown,	
473		L. C. Blair, Rummersfield,	
463	Royster's Special Fruit and Crop Grower,	Jas. McNamara, Cadiz,	9.47
714	†Royster's Superior Potash Mixture,	Harford Grange, Harford,	10.27
1337		C. H. Dildine, Orangeville,	
	SCOTT FERTILIZER CO., ELKTON, MD.		
887	Scott's Alkaline Phosphate,	W. H. Diehl, Northumberland, R. D.	9.23
888	†Scott's Tip Top and Potasb,	W. H. Diehl, Northumberland, R. D.	9.46
1468		Elias S. Brubaker, Richland,	
	SOUTHERN FERTILIZING CO., BY A. A. C. CO., N. Y.		
222	Southern Fertilizing Co.'s Special Brand for All Crops.	Wm. F. Howe, York Springs, R. D. 2.	9.27
	SWIFT & CO., CHICAGO, ILL.		
1377	†Swift's Pure Diamond H. Fertilizer,	B. W. Jones, Doe Run,	8.61
394		Lan. Co. Farmer's Asson., Manheim, R. D.	
1394		Curtis Kelley, Canton, No. 72,	
837	†Swift's Pure High Grade Pbosphate and Potash.	Beaver Hdw. Co., Beaver,	7.50
1321		H. B. Low & Son, Orangeville,	
163	Swift's Pure Plantation 8 and 5,	J. R. Hummel, Bethlehem,	6.89
681	†Swift's Pure Diamond G. Fertilizer,	G. M. Englehorts, Mifflinburg, R. F. D. 6.	8.35
551		Amandus Wootring, Schnecksville,	
1395		Custis Kelley, Canton, No. 72,	
1681	†Swift's Special Phosphate and Potash,	McCalmont & Co., Bellefonte,	8.94
975		H. W. Sweiger, Gap,	
1717		A. M. McClure, Everett,	
	I. P. THOMAS & SONS CO., PHILADELPHIA, PA.		
355	†Bull's Eye Fertilizer,	Elmer Eaby, Lititz,	10.88
104		O. H. Cressman, Allentown, R. D.,	
474		F. S. Van Orman, LeRaysville,	
678	†Pilot Potash Manure,	J. K. Young, Mifflinburg,	9.21
208		John Engle, Hummelstown,	
1315		F. P. Davis, Bloomsburg,	
102	†Special Corn and Grain Fertilizer,	O. H. Cressman, Allentown, R. D.,	11.06
1067		Geo. P. Noll, Lewisburg,	
1068	†Thomas' Square Deal Fertilizer,	Geo. P. Noll, Lewisburg,	10.01
628		G. A. Haden, Flicksville, R. D. 1,	
1331		Rusb Harrison, Forks,	
	JAMES THOMAS, WILLIAMSPORT, PA.		
138	†Thomas' Dissolved Alkaline Phosphate,	Coryell & Russ Co., St. Marys,	10.16
1523		McEwen Hdw. Co., New Bethlehem,	
	NASSAU FERTILIZER CO., NEW YORK CITY, N. Y.		
578	†Grass and Grain Fertilizer,	C. J. Ford, LeRaysville,	9.93
1558		A. J. La Barr, Caverton,	
588	†Royal Mixture,	Mat. Griffin, Friendsville,	8.58
1890		Kemmerer Hdw. Co., Lehighton,	

*Constituent falls below guaranty.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.						
Available.			Total.				Total.				
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
5.82	6.00	1.64	7.46	6.50	3.77	.....	3.77	3.00	13.00	10.15	147
8.35	8.00	.89	9.24	8.50	6.79	.....	679	5.00	17.67	17.50	86
										.....	111
										.....	1098
*9.73	10.00	.93	10.66	10.50	3.51	.....	3.51	2.00	15.31	16.00	287
										15.00	62
										15.20	473
*9.56	10.00	.90	10.46	10.50	8.04	.....	8.04	8.00	19.81	18.75	463
13.46	12.00	1.11	14.57	12.50	5.02	.....	5.02	5.00	19.58	17.50	714
										17.00	1337
9.93	8.00	3.14	13.07	.....	4.65	.....	*4.65	5.00	17.44	15.50	887
13.16	10.00	.36	13.52	.....	2.45	.....	2.45	2.00	16.50	19.50	888
										15.50	1468
10.33	10.00	.93	11.26	11.00	5.71	.....	*5.71	6.00	18.00	17.00	222
12.07	12.00	.70	*12.77	13.00	5.07	.....	5.07	5.00	18.48	18.00	1377
										16.00	394
10.00	10.00	1.28	11.28	11.00	3.99	.....	3.99	4.00	16.15	18.25	1394
										17.50	837
										15.40	1321
8.43	8.00	.76	9.19	9.00	5.15	.....	5.15	5.00	14.47	15.00	163
9.91	10.00	.31	10.22	11.00	7.60	.....	*7.60	8.00	19.39	20.00	681
										19.00	551
										22.00	1395
10.72	10.00	.16	10.88	11.00	2.11	.....	2.11	2.00	14.35	16.00	1681
										13.00	975
										15.00	1717
10.06	10.00	.87	10.93	11.00	7.77	.....	*7.77	8.00	19.86	19.50	355
										18.00	104
										17.60	474
7.95	8.00	.74	*8.69	9.00	5.23	.....	5.23	5.00	15.75	14.50	678
										15.50	208
										16.00	1315
10.00	10.00	.76	*10.76	11.00	6.53	.....	6.53	6.50	18.56	18.00	102
										19.00	1067
8.98	9.00	.52	*9.50	10.00	3.98	.....	3.98	3.00	15.14	14.00	1068
										13.50	628
										16.00	1331
10.87	10.00	.17	11.04	11.00	2.38	.....	2.38	2.00	14.76	20.00	138
										22.00	1523
10.23	10.00	1.42	11.65	11.00	2.32	.....	2.32	2.00	14.64	15.00	578
										17.00	1558
8.37	8.00	1.13	9.50	9.00	5.30	.....	5.30	5.00	16.24	17.50	588
										18.00	1890

†Composite sample.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	F. W. TUNNELL & CO., INC., PHILADELPHIA.		
120	Gehman's Special,	W. M. Gehman, Macungie,	11.02
	TUSCARORA FERTILIZER CO., BALTIMORE, MD.		
285	†Tuscarora Alkaline,	Frederick & Inks, Fairchance,	9.07
891		Frank Geist (not an agent), Northumberland, R. D.	
286	Tuscarora Potash Mixture,	Fredericks & Inks, Fairchance,	6.03
	J. E. TYGERT CO., PHILADELPHIA, P., BY A. A. C. CO., N. Y.		
1155	Soluble Phosphate and Potash,	Geo. S. Miller, Mifflinville,	12.24
	UNION CHEMICAL WORKS, NORTH WALES, PA.		
1666	†Superphosphate and Potash No. 2,	A. W. Schoener, Womelsdorf,	8.31
1783		Jesse Ziegler, Royersford,	
	UNITED STATES FERTILIZER CO., THE, MD.		
748	Farm Bell Alkaline Mixture,	S. B. Jackson, Carlisle,	9.07
234	†Farm Bell Phosphate and Potash,	J. Chester Bell, Gettysburg,	7.30
26		J. N. Getz, Lock Haven,	
443		Henry P. Brown, Laurys,	
1900	Farm Bell Ten and Five Mixture,	Wm. Ewes, Jerseytown, R. D. 1,	9.56
	VIRGINIA CAROLINA CHEMICAL CO., FOR RESALE BY RASIN MONUMENTAL CO., BALTIMORE, MD.		
692	†V. C. C. Co. Peerless Phosphate and Potash.	Isaac Kunkle, Winfield, R. F. D.,	9.01
1256		J. D. Markle, Hanover,	
619	V. C. C. Co. Union Superphospbate,	Huston Bros., Three Springs,	6.37
	FOR W. E. WHANN CO., PHILADELPHIA, PA., BY A. A. C. Co., N. Y.		
23	Whann's Alkaline Phosphate,	S. E. Schwalm, Valley View,	11.58
	ROBERT A. WOOLDRIDGE CO., BALTIMORE, MD.		
72	Wooldridge's Ideal Grain and Grass Producer.	J. G. Sully, Richfield,	8.61
742	†Wooldridge's German Potash Mixture,	S. B. Jackson, Carlisle,	10.09
455		Rufus Bohr, Snedburg,	
1053		Bennage & Dersham, White Deer,	
309	†Wooldridge's Liberty Bell Potash Mixture	F. G. Evans, Kelton,	9.14
747		S. B. Jackson, Carlisle,	
454	†Wooldridge's No. 2 Phosphate and Potash.	Rufus Bohr, Snedburg,	8.89
218		A. M. Brandt & Son, Dillsburg,	
1052		Bennage & Dersham, White Deer,	
71	†Wooldridge's Old Sledge Phosphate,	J. G. Sully, Richfield,	10.61
1966		Mock & Royer, Williamsburg,	
	YORK CHEMICAL WORKS, YORK, PA.		
1259	Dempwolf's Black Cross,	M. J. Sheffer, Hanover,	8.84
1539	†Dempwolf's Red Cross,	Leonard Rhone, Center Hall,	7.61
1229		D. E. Brandt, East Berlin,	
1709		Albert Dively, Bedford, R. F. D.,	
502	†Dempwolf's York Special,	R. L. Riegen & Son, Herndon,	7.44
211		W. H. Rapp, Union Deposit,	
1234		N. M. Berkheimer, Abbottstown,	

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.						
Available.			Total.				Total.				
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
*11.71	13.00	1.54	*13.25	14.00	8.45	.....	8.45	6.00	18.94	20.00	120
10.29	10.00	.43	10.72	10.50	5.24	.....	5.24	5.00	17.34	19.00	285
										18.00	891
6.55	6.00	.53	7.08	6.50	3.19	.....	3.19	3.00	12.58	16.00	286
*9.66	10.00	1.16	10.82	11.00	3.02	.....	3.02	2.00	14.83	15.50	1155
9.93	10.00	.40	*10.33	11.00	5.05	.....	5.05	5.00	16.86	17.00	1666
										17.50	1783
10.21	10.00	.92	11.13	11.00	2.28	.....	2.28	2.00	14.32	16.50	748
8.75	8.00	.20	8.95	9.00	5.37	.....	5.37	5.00	16.23	15.00	234
										17.00	26
10.39	10.00	.37	*10.76	11.00	5.10	.....	5.10	5.00	17.23	14.00	443
										15.00	1900
7.99	8.00	1.44	9.43	9.00	2.11	.....	2.11	2.00	12.84	.....	692
										13.00	1256
*5.63	6.00	1.12	*6.75	7.00	3.04	.....	3.04	3.00	11.91	12.00	619
10.96	10.00	.77	11.73	11.00	2.13	.....	2.13	2.00	14.79	13.95	23
10.15	10.00	.75	10.90	11.00	4.65	.....	4.65	4.00	16.72	16.00	72
										14.50	742
10.49	10.00	.83	11.32	11.00	2.13	.....	2.13	2.00	14.44	16.00	455
										14.00	1053
12.05	12.00	.60	*12.65	13.00	3.39	.....	3.39	3.00	16.76	17.00	309
										17.60	747
										17.00	454
8.18	8.00	.87	9.05	9.00	4.97	.....	4.97	5.00	15.67	17.50	218
										15.00	1052
12.49	12.00	.68	13.17	13.00	5.19	.....	5.19	5.00	18.92	18.00	71
										20.00	1966
10.16	10.00	.51	10.67	10.50	2.58	.....	2.58	2.00	14.54	15.50	1259
										16.25	1539
10.16	10.00	.45	10.61	10.50	5.86	.....	51.86	5.00	17.84	16.00	1229
										.....	1709
										15.00	502
8.80	8.00	1.25	10.05	8.50	4.63	.....	4.63	4.00	15.93	16.00	211
										15.50	1234

*Constituent falls below guaranty.

ACIDULATED

Furnishing

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK.	
758	Acid Phosphate,	Nickless & Stewart, Shippensburg,
268	†Dissolved Phosphate,	J. A. McCombs, New Salem,
46		John Artley, Muncy,
662		Dufton Hdw. Co., Clearfield,
1442	†Bardley's Soluble Dissolved Phosphate,	Geo. R. Andrews, Enon Valley,
488		Eli Yost, McEwensville,
1943		H. G. Luker, Kittanning,
1648	†Canton Chemical Baker's Dissolved S. C. Phosphate.	Greencastle Elev., Co., Greencastle,
1972		H. L. Orr, Tyrone,
96	†Crocker's Dissolved Phosphate,	W. H. Kaufman, Harmony,
848		L. P. Amer, Orangeville, Ohio,
1697	Great East. Unammoniated Wheat Special,	J. H. Clemson, Stormstown,
1933	Maryland Dissolved S. C. Phosphate,	Smith & McKelvey, Blairsville,
1853	Michigan Carbon Works Red Line Phosphate.	Davis & Hyde, Spartansburg,
1423	Quinniplac Soluble Dissolved Phosphate,	J. L. Culp, Indiana,
1347	Read's Acid Phosphate,	Salem Smith, Orwigsburg, R. D.,
1753	Sharpless & Carpenter's Acid Phosphate,	Henry Frankenfield, Ferndale,
838	Williams & Clark Acorn Acid Phosphate,	C. F. Thompson, Beaver Falls,
	ARMOUR FERTILIZER WORKS, BALTIMORE, MD.	
870	†Star Phosphate,	Louck's Hdw. Co., Scottdale,
1917		C. L. Shipman, Hughesville,
	ATLANTIC FERTILIZER CO., BALTIMORE, MD.	
1929	Dissolved Phosphate, 14%,	S. J. Sider, Blacklick,
	BALTIMORE FERTILIZER CO., BALTIMORE, MD.	
231	†Honest Acid Phosphate,	J. N. Lightner, Gettysburg,
614		Howard Toells, McConnellsburg,
	BAUGH & SONS CO., PHILADELPHIA, PA.	
235	†Baugh's High Grade Acid Phosphate,	H. D. and J. F. Bream, Gettysburg,
186		J. A. Romberger, Elizabethville,
271		Hogsett & Hankins, Uniontown,
464	†Baugh's 16% Acid Phosphate,	Orwell Farmers' Club, Orwell,
41		Herman Keebler, Montoursville,
617		C. E. Starr, Three Springs,
	BOWKER FERTILIZER CO., NEW YORK, N. Y.	
1192	†Bowker's Dissolved Phosphate,	Murray & Co., Honesdale,
422		A. C. McClure, Burgettstown,
1922		Frank S. Carothers, Jersey Shore,
	BUFFALO FERTILIZER CO., BUFFALO, N. Y.	
1429	†Dissolved Phosphate,	Learn Gen. Store, Indiana,
653		B. J. Crismaan, Curwensville,
1518		D. A. Wilson, Sligo.
	COE-MORTIMER CO., NEW YORK, N. Y.	
593	E. Frank Coe's High Grade Soluble Phosphate.	Wm. Dayton, Montrose,

†Composite sample.

ROCK PHOSPHATE.

Phosphoric Acid.

Phosphoric Acid in 100 Pounds.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.	Moisture in 100 pounds.
Available.			Total.					
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.				
7.39	14.69	14.00	1.54	16.23	15.00	14.35	13.50	758
							16.00	268
9.81	12.07	12.00	1.68	13.75	13.00	12.49	14.50	46
							17.50	662
							15.20	1442
10.45	14.45	14.00	1.90	16.35	15.00	14.29	13.00	488
							20.00	1943
8.78	14.76	14.00	.73	15.49	15.00	14.10	13.00	1648
							14.50	1972
10.66	14.56	14.00	2.12	16.68	15.00	14.47	15.00	96
							----------	848
4.66	14.17	12.00	.37	14.54	13.00	13.53	14.00	1697
8.74	14.82	14.00	2.07	16.89	15.00	14.64	16.00	1933
11.59	14.17	14.00	2.44	16.61	15.00	14.28	15.00	1853
8.62	15.15	14.00	1.94	17.09	15.00	14.82	15.00	1423
8.82	14.86	14.00	.57	15.43	15.00	14.11	15.00	1347
8.61	14.79	14.00	.56	15.35	15.00	14.06	15.00	1753
10.67	14.45	14.00	2.09	16.54	15.00	14.36	16.00	838
9.32	14.46	14.00	.61	15.07	14.50	13.82	15.00	870
							14.00	1917
8.03	15.22	14.00	1.29	16.51	15.00	14.61	15.00	1929
6.33	16.51	14.00	.51	17.02	15.00	15.26	14.00	231
							14.00	614
							14.00	235
9.73	14.68	14.00	.46	15.14	----------	13.95	13.00	186
							14.00	271
							12.96	464
11.82	16.55	16.00	.24	16.79	----------	15.21	15.00	41
							13.25	617
							----------	1192
8.37	12.11	11.00	1.66	13.77	12.00	12.51	18.00	422
							14.00	1922
							15.00	1429
8.95	13.93	14.00	1.54	15.47	15.00	13.77	15.00	653
							15.00	1518
11.12	14.18	14.00	1.35	15.53	15.00	13.92	15.00	593

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	HENRY COPE & CO., LINCOLN UNIVERSITY, PA.	
827	Henry Cope & CO.'s Acid Phosphate,	H. A. Mendenhall, Toughkenamon,
	JAMES G. DOWNWARD CO., THE, COATESVILLE, PA.	
941	High Grade Acid Phosphate,	Michael Scott, Quarryville, R. D.,
	EUREKA FERTILIZER CO., PERRYVILLE, MD.	
615	P. and P. Superphosphate,	A. N. Witter, Waterfall,
	W. S. FARMER & CO.'S, BALTIMORE, MD.	
1738	W. S. Farmer & Co.'s Dissolved S. C. Phosphate.	P. J. Cover & Son, Meyersdale,
	GRIFFITH & BOYD CO., Baltimore, Md.	
994	High Grade Acid Phosphate,	W. C. Herr, Strasburg,
	S. M. HESS & BRO., INC., PHILADELPHIA, PA.	
605	†S. M. Hess & Bros. High Grade Acid	J. E. Emerick, Alum Bank,
1713	Phosphate.	Ira Price, Everett, R. D. 6,
	HUBBARD FERTILIZER CO., BALTIMORE, MD.	
1747	Hubbard's 16% Phosphate,	S. B. Alcott, Ursina,
	LANCASTER CHEMICAL CO., LANCASCASTER, PA.	
970	†No. 8 Acid Phosphate,	I. B. Myer, Leola,
1037		L. N. Miller, Neff's Mills,
	LISTER AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.	
699		Calvin Deakin, Susquehanna,
28	†Lister's Buyer's Choice Acid Phosphate,	A. F. Wentz, Jersey Shore,
917		B. F. Walters, Christiana,
	FREDERICK MEHRING, BRUCEVILLE, MD.	
1245	Acid Phosphate,	J. N. Slifer, Littlestown,
	NASSAU FERTILIZER CO., NEW YORK.	
1030		A. J. Bowser, Mill Creek,
1015	†Soluble Phosphate,	Oscar Thompson, Conyngham,
1600		Peffer & Son, Punxsutawney,
	NITRATE AGENCY CO., NEW YORK.	
1586	Acid Phosphate,	M. T. Craig & Son, Limestone,
	G. OBER & SON'S CO., BALTIMORE, MD.	
1411	†Ober's Dissolved Phosphate,	S. J. Louther, Carroltown,
1422		J. L. Culp, Indiana,
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.	
1034	†Piedmont 14% Acid Phosphate,	J. J. Simpson, Huntingdon,
1687		J. G. Dubbs, Bellefonte,

†Composite sample.

PHOSPHATE—Continued.

Phosphoric Acid in 100 Pounds.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.	Moisture in 100 pounds.
Available.			Total.					
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.				
11.17	16.13	14.00	1.20	17.33	15.00	15.26	13.00	827
7.56	*13.60	14.00	1.15	*14.75	15.00	13.41	14.00	941
10.66	15.00	14.00	.94	15.94	15.00	14.35	14.00	615
6.31	14.70	14.00	1.26	15.96	15.00	14.24	18.00	1738
7.08	*12.21	14.00	3.09	15.30	15.00	13.10	14.00	994
8.91	14.35	14.00	.73	15.08	15.00	13.81	14.50 13.50	605 1713
9.03	16.17	16.00	1.02	17.19	17.00	15.22	16.00	1747
9.45	*11.28	14.00	3.55	14.83	15.00	12.62	12.50 18.00	970 1037
11.19	14.27	14.00	.93	15.20	15.00	13.81	16.00 17.00 13.00	699 28 917
7.45	17.89	15.00	.18	18.07	----------	16.18	14.00	1245
10.17	15.02	14.00	1.15	16.17	15.00	14.42	14.55 15.50 17.00	1030 1015 1600
12.09	14.66	14.00	1.43	16.09	15.00	14.28	14.00	1586
8.98	14.99	14.00	.48	15.47	15.00	14.18	14.50 15.00	1411 1422
7.44	14.84	14.00	.33	15.17	----------	14.02	13.00 15.00	1034 1687

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	PENNSYLVANIA FERTILIZER CO., BUFFALO, N. Y.	
1598	Acid Phosphate,	Reynoldsville Hdw. Co., Reynoldsville,
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.	
526	†Royster's 14% Acid Phosphate,	Jos. Baker, Ebensburg, R. D.,
280		King Bros., Uniontown,
1496		L. K. Gruber, Reinhold,
1168	†Royster's High Grade 16% Acid Phos-	Bitler & John, Catawissa,
1548	phate.	R. D. Forman, Center Hall,
	SCHAAL SHELDON FERTILIZER CO., BUFFALO, N. Y.	
575	Dissolved Phosphate,	P. A. Drane, Marwood,
	JOHN T. SWACK, DU BOIS, PA.	
122	Swack's Acid Phosphate,	E. J. Flynn, Grampian,
	SWIFT & CO., CHICAGO, ILL.	
432	Swift's Pure Garden City Phosphate,	Beaver Hdw. Co., Beaver,
	JAMES THOMAS, WILLIAMSPORT, PA.	
137	†Thomas' Dissolved Florida Phosphate,	Coryell & Russ Co., St. Marys,
1522		McEwen Hdw. Co., New Bethlehem,
	UNITED STATES FERTILIZER CO., BALTIMORE, MD.	
1901	Farm Bell Acid Phosphate,	Wm. Eves, Jerseytown, R. D.,
	ROBERT A. WOOLDRIDGE CO., BALTIMORE, MD.	
308	†Wooldridge's Florida Acid Phosphate,	F. G. Evans, Kelton,
456		Rufus Bohr, Snedburg,

†Composite sample.

PHOSPHATE—Continued.

Phosphoric Acid in 100 Pounds.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.	Moisture in 100 Pounds.
Available.		Insoluble.	Total.					
Found.	Guaranteed.		Found.	Guaranteed.				
8.37	*11.07	12.00	1.35	*12.42	13.00	11.65	18.00	1598
6.03	14.46	14.00	1.01	15.47	14.50	13.96	14.00	526
							14.50	280
							14.00	1496
10.76	*15.58	16.00	.78	16.36	16.50	14.71	16.00	1168
							15.25	1548
12.47	*13.33	14.00	2.95	16.28	15.00	13.88	16.00	575
11.44	15.72	14.00	.36	16.08	----------	14.17	13.65	122
10.71	14.19	14.00	.70	14.89	15.00	13.68	15.00	432
9.26	13.04	12.00	.36	*13.40	14.00	12.73	17.00	137
							18.00	1522
10.71	16.53	14.00	.43	16.96	15.00	15.25	12.50	1901
10.37	14.72	14.00	.73	15.45	15.00	14.06	12.50	308
							15.50	456

*Constituent falls below guaranty.

GROUND BONE

Furnishing Phosphoric

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK.	
506	Bone Meal,	Wallace Sherbine, Witmore,
277	†Fine Ground Bone,	King Bros., Uniontown,
133		Hall, Kaul & Hyde, St. Marys,
809		F. G. Evans, Kelton,
1948	†High Grade Ground Bone,	H. L. Stultz, Hollidaysburg,
1447		Theilman Seed Co., Erie City,
1969		H. L. Orr, Tyrone,
1211	†Pure Raw Bone,	A. A. Miller, Somerset, R. F. D. 4,
1647		Greeneastle Elevator Co., Greeneastle,
	R. S. AUKER, SHAMOKIN, PA.	
511	Pure Ground Bone Meal,	A. Skelly, Ebensburg,
	AMERICAN FERTILIZING CO., BALTIMORE, MD.	
908	Pure Raw Bone,	Jones Eavenson, Christiana,
	ARMOUR FERTILIZER WORKS, BALTIMORE, MD.	
523	†Bone Meal,	A. Skelly, Ebensburg,
124		Hibner Hoover Co., Du Bois,
725		Kirkpatriek Bros., Renfrew,
2028	Raw Bone Meal,	Buffalo Valley Fruit Farm, Mifflinburg,
	BAUGH & SONS CO., PHILADELPHIA, PENNA.	
298	†Baugh's Raw Bone Meal (Warranted Pure.)	Long & Bunting, Oxford,
272		Hogsett & Hankins, Uniontown,
655		Routeh & Swartzel, Clearfield,
	BERG CO., THE, PHILADELPHIA, PA.	
293	Berg's Raw Bone, Fine,	B. R. Watson, Oxford,
	BOWKERFERTILIZER CO., NEW YORK.	
1110	Bowker's Fresh Ground Bone,	J. A. Stoll & Co., Kane,
	BUFFALO FERTILIZER CO., THE, BUFFALO, N. Y.	
652	†Bone Meal,	B. J. Crissman, Curwensville,
1430		Learn Gen. Store, Indiana,
	GRIFFITH & BOYD CO., BALTIMORE, MD.	
833	Pure Fine Ground Bone Meal,	W. H. Walker, Kennett Square,
902	Soft Ground Bone Meal,	E. D. Tewksbury, Oatawissa, R. D. 5,
	HUBBARD FERTILIZER CO., BALTIMORE, MD.	
1307	Hubbard's Warranted Raw Bone, 4½-50,	D. J. Trout, Stewartstown,
	JARECKI CHEMICAL CO., SANDUSKY, OHIO.	
1513	Pure Ground Bone,	Clark Bros., Oil City,
	D. B. MARTIN CO., PHILADELPHIA, PA.	
396	Martin's Pure Ground Bone,	Lan. Co. Farmers' Assn., Manheim, R. D.

†Composite sample.

FERTILIZERS.

Acid and Nitrogen.

Moisture in 100 pounds.	Mechanical Analysis.		Chemical Analysis.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Diameter less than 1-50 inch "fine."	Diameter greater than 1-50 inch "coarse."	Phosphoric Acid		Nitrogen.				
			Found.	Guaranteed.	Found.	Guaranteed.			
5.02	67	33	16.56	14.73	1.61	1.65	23.32	30.00	506
5.20	64	36	25.21	22.88	2.91	2.47	35.47	34.00	277
								36.00	133
								27.00	809
								32.00	1948
6.02	61	39	21.50	20.59	3.85	3.29	37.68	40.00	1447
								40.00	1969
10.89	64	36	22.00	21.51	3.72	3.70	37.32	29.00	1211
								32.00	1647
7.81	21	79	*18.24	20.00	3.70	2.47	30.06	31.00	511
7.07	27	73	22.79	22.50	4.36	3.70	36.24	31.00	908
								31.50	523
3.94	62	38	22.87	22.50	2.73	2.47	32.39	35.00	124
								30.00	735
7.64	47	53	22.02	22.00	3.98	3.70	35.97	----------	2028
								27.00	298
8.47	56	44	*20.79	21.50	3.72	3.70	34.53	34.00	272
								32.00	655
5.04	44	56	22.57	20.00	3.53	3.00	34.35	31.00	293
8.17	76	24	22.92	22.83	2.57	2.47	33.08	32.00	1110
8.91	72	28	*21.09	22.00	2.72	2.90	31.89	30.00	652
								32.00	1430
8.39	63	37	*18.57	22.00	4.49	3.30	36.48	31.00	883
5.79	68	32	18.92	11.00	2.76	2.50	26.88	26.00	902
6.44	49	51	*20.29	22.00	3.82	3.69	34.02	30.00	1307
4.60	68	32	23.21	20.00	2.98	2.50	34.57	36.00	1513
4.37	61	39	*21.68	22.90	2.74	1.65	31.81	25.00	396

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	PITTSBURG PROVISION AND PACKING CO., PITTSBURG, PA.	
724	†Pure Raw Bone Meal,	C. A. Foster, Carnegie,
1861		W. J. Gilson, Titusville,
	POLLOCK FERTILIZER CO., BALTIMORE, MD.	
1103		B. J. Crissman, Curwensville,
324	Soft Ground Bone,	Harvey Spencer, Cochraanville,
1267		Strayer Bros. Co., York,
	READING BONE FERTILIZER CO., READING, PA.	
900	Pure Raw Bone,	C. L. Pike, Catawissa, R. D. 5,
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.	
528	Pure Raw Bone Meal,	Jos. Baker, Ebensburg, R. D.,
	JAMES THOMAS, WILLIAMSPORT, PA.	
136	Thomas' Animal Ground Bone,	Coryell & Russ Co., St. Marys,
	F. W. TUNNELL & CO., PHILADELPHIA, PA.	
1363	Pure Ground Bone,	Edw. Brinton & Son, West Chester,
	YORK CHEMICAL WORKS, YORK, PA.	
315	Dempwolf's Pure Ground Bone,	W. S. Hastings & Son, Atglen,

†Composite sample.

FERTILIZERS—Continued.

Moisture in 100 pounds.	Mechanical Analysis.		Chemical Analysis.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Diameter less than 1-50 inch "fine."	Diameter greater than 1-50 inch "coarse."	Phosphoric Acid		Nitrogen.				
			Found.	Guaranteed.	Found.	Guaranteed.			
3.43	65	35	21.22	21.00	3.88	3.70	36.88	31.00	724
								29.00	1861
5.50	57	43	15.37	13.73	2.72	2.47	26.31	30.00	1103
								28.00	324
								28.75	1267
6.18	42	58	21.52	18.00	3.63	3.28	33.80	34.00	900
8.62	26	74	23.93	21.50	4.31	3.70	36.76	32.00	528
5.33	53	47	24.98	25.00	3.04	2.88	35.02	32.00	136
2.73	56	44	26.49	25.00	*1.70	2.47	31.05	32.00	1363
2.06	62	38	23.14	23.00	2.61	2.47	32.44	30.00	315

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken
	BOWKER FERTILIZER CO., NEW YORK.	
895	Bowker's Ammoniated O. I. O. Phosphate,	W. W. Kase & Co., Riverside,
	GRIFFITH & BOYD CO., BALTIMORE, MD.	
240	Pure Dissolved Animal Bone,	H. J. Van Dyke, Gettysburg, R. D. 6,
	D. B. MARTIN CO., PHILADELPHIA, PA.	
263	†Martin's Crop Producer,	H. Cooke & Co., Dillsburg,
6		John K. Miller, Summit Sta.,
430		A. E. Walker, Burgettstown,
	READING BONE FERTILIZER CO., READING, PA.	
254	Dissolved Animal Matter,	Grover C. Myers, Idaville,

†Composite sample.

FERTILIZERS.

Moisture in 100 pounds.	Phosphoric Acid in 100 Pounds.					Nitrogen in 100 Pounds.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
	Available.		Insoluble.	Total.						
	Found.	Guaranteed.		Found.	Guaranteed.	Found.	Guaranteed.			
7.31	11.35	10.00	1.03	12.38	11.00	.85	.62	15.63	15.50	895
7.66	11.01	10.00	4.02	15.03	11.00	2.18	2.00	29.73	27.00	240
11.16	*9.53	10.00	2.39	11.92	----------	1.21	1.03	19.54	15.50 12.50 21.00	263 6 430
4.59	*9.18	10.00	2.82	12.00	11.00	.95	.82	18.86	17.00	254

*Constituent falls below guaranty.

MISCELLANEOUS

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK.		
329	†Muriate of Potash,	Wm. S. Ball, Media,	1.17
460		J. P. Griffith & Sons, Nichols, N.Y.	
459	†Nitrate of Soda,	J. P. Griffith & Son, Nichols, N. Y.	
21		Philip Updegrave, Valley View,	1.61
577		C. J. Ford, Le Raysville,	
1557	†Genuine German Kainit,	H. B. Hamid, Caverton,	
743		S. B. Jackson, Carlisle,	1.19
1827		V. L. Crandall, McClure,	
	AMERICAN FERTILIZER CO., BALTIMORE, MD.		
909	American Genuine German Kainit,	Jones Eavenson, Christiana,	1.73
910	Muriate of Potash,	Jones Eavenson, Christiana,	2.88
	ARMOUR FERTILIZER WORKS, BALTIMORE, MD.		
1916	†Kainit,	C. L. Shipman, Hughesville,	.46
1959		A. B. Mock, Martinsburg,	
	BAUGH & SONS CO., PHILADELPHIA, PA.		
465	†Nitrate of Soda,	Orwell Farmers' Club, Orwell,	1.71
531		A. F. Kimmel, Orwigsburg,	
1801	†Genuine German Kainit,	B. F. Horting, Newport,	
246		Biglerville W'house Co., Biglerville,	1.12
1868		Long & Miller, Liverpool,	
	BUFFALO FERTILIZER CO., BUFFALO, N. Y.		
654	Muriate of Potash,	B. J. Crisman, Curwensville,	.27
	COE-MORTIMER CO., NEW YORK.		
609	†Thomas' Phosphate Powder (Basic Slag Phosphate.)	A. C. Richards & Son, Schellsburg,	
591		Wm. Dayton, Montrose,	.09
1587		W. T. Craig & Son, Limestone,	
1020	Nitrate of Soda,	N. G. Williams, St. Johns,	1.84
	COLUMBIA GUANO CO., BALTIMORE, MD.		
1433	Genuine German Kainit,	A. George & Son, Homer City,	.66
	GERMAN KALI WORKS, BALTIMORE, MD.		
1588	Muriatte of Potash,	W. T. Craig & Son, Limestone,	1.12
1589	Sulphate of Potash,	W. T. Craig & Son, Limestone,	.26
	GRIFFITH & BOYD CO., BALTIMORE, MD.		
997	Genuine German Kainit,	W. C. Herr, Strasbury,	.28
	S. M. HESS & BRO., INC., PHILADELPHIA, PA.		
1715	S. M. Hess & Bro.'s Muriate of Potash,	Ira Price, Everett, R. D. 6,	1.30
	LISTER AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.		
918	Genuine German Kainit,	B. F. Walter, Christiana,	1.78
29	Lister's High Grade Dried Blood,	A. F. Wentz, Jersey Shore,	10.04
700	Nitrate of Soda,	Calvin Deakin, Susquehanna,	2.31

†Composite sample.

FERTILIZERS.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Total.					Total.						
Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Found.	Guaranteed.			
------	------	------	------	------	50.58	------	50.58	49.00	------	------	53.61	45 00	329
												50.60	463
												52.60	459
------	------	------	------	------	------	------	------	------	16.08	15.00	65.76	50 00	21
												55.00	577
												14.00	1557
------	------	------	------	------	13.06	------	13.06	12.00	------	------	15.31	------	743
												14.00	1827
------	------	------	------	------	13.62	------	13.62	12.00	------	------	15.87	12.00	909
------	------	------	------	------	48.98	------	48.98	48.00	------	------	51.98	42.00	910
------	------	------	------	------	14.38	------	14.38	12.00	------	------	16.64	14.00	1916
												13.50	1959
------	------	------	------	------	------	------	------	------	15.55	15.23	63.58	50.00	465
												50.00	531
												12.25	1801
------	------	------	------	------	14.34	------	14.34	12.00	------	------	16.64	14.00	246
												14.00	1868
------	------	------	------	------	53.40	------	53.40	48.00	------	------	56.17	46.00	654
------	------	------	18.34	17.00	------	------	------	------	------	------	------	18.40	609
												19.00	591
------	------	------	------	------	------	------	------	------	------	------	------	18.00	1587
------	------	------	------	------	------	------	------	------	15.85	15.00	64.77	55.00	1020
------	------	------	------	------	13.98	------	13.98	12.00	------	------	16.28	14.50	1433
------	------	------	------	------	49.46	------	*49.46	50.00	------	------	52.44	43.00	1588
------	------	------	------	------	------	49.58	49.58	48.00	------	------	64.50	52.00	1589
------	------	------	------	------	15.04	------	15.04	12.00	------	------	17.35	------	997
------	------	------	------	------	47.92	------	*47.92	49.00	------	------	50.86	46.00	1715
------	------	------	------	------	12.88	------	12.88	12.00	------	------	15.16	13.00	918
------	------	------	------	------	------	------	------	------	*9.06	9.87	43.27	56.00	29
------	------	------	------	------	------	------	------	------	15.90	15.00	64.96	55.00	709

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	NITRATE AGENCIES CO., NEW YORK.		
390	Muriate of Potash,	Lan. Co. Farmers' Assn., Manheim,	.32
949	Dried Blood,	S. M. Book & Bro., Peters Creek, R. D.	15.86
950	Ground Tankage,	S. M. Book & Bro., Peters Creek, R. D.	8.01
1585	Nitrate of Soda,	W. T. Craig & Son, Limestone,	2.03
	PIEDMONT MT. AIRY GUANO CO., BALMORE, MD.		
1036	Sulphate of Potash,	Jno. G. Simpson, Huntingdon,	.72
1690	Muriate of Potash,	Jno. G. Dubbs, Bellefonte,	.26
	PITTSBURG PROVISION AND PACKING CO., PITTSBURG, PA.		
266	Pure Bone and Meat,	Weddle & Sutton, West Newton,	11.02
	READING BONE FERTILIZER CO., READING, PA.		
289	Nitrate of Soda,	Reading Bone Fert. Co., Reading,	.64
290	Muriate of Potash,	Reading Bone Fert. Co., Reading,	.54
	RASIN MONUMENTAL CO., BALTIMORE, MD.		
320	†Muriate of Potash,	E. H. Keen & Co., Parksburg,	2.89
1552		Chas. McCormick, State College,	
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.		
1497	Genuine German Kainit,	L. K. Gruber, Reinhold,	1.34
1664	Muriate of Potash,	Chas. Geiger, Scarlett Mills,	1.06
1665	Nitrate of Soda,	Chas. Geiger, Scarlett Mills,	1.94
	JOHN F. SWACK, DU BOIS, PA.		
672	Nitrate of Soda,	E. J. Flynn, Grampian,	1.34
	SWIFT & CO., CHICAGO, ILL.		
1716	Swift's Pure German Kainit,	A. M. McClure, Everett,	1.06
	I. P. THOMAS & SON'S CO., PHILADELPHIA, PA.		
478	Nitrate of Soda,	F. L. Van Orman, LeRaysville,	1.98
477	Top Dresser for Grass,	F. L. Van Orman, LeRaysville,	6.94
	UNION CHEMICAL WORKS, NORTH WALES, PA.		
16	Nitrate of Soda,	Frank Dietrick, Friedensburg,	2.41
	UNITED STATES FERTILIZER CO., BALTIMORE, MD.		
228	Kainit—12,	J. Chester Bell, Gettysburg, R. D. 12.	1.09

†Composite sample.

FERTILIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 lbs.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.	Sample number.
Available.		Total.					Total.						
Found.	Guaranteed.	Found.	Guaranteed.	Insoluble.	Present as sulphate.	Present as muriate.	Found.	Guaranteed.	Found.	Guaranteed.			
-------	-------	-------	-------	-------	50.54	-------	50.54	50.00	-------	-------	53.56	42.50	390
-------	-------	-------	-------	-------	-------	-------	-------	-------	*12.48	13.18	51.31	63.40	949
-------	-------	-------	*11.50	13.73	-------	-------	-------	-------	*5.51	5.75	24.98	32.00	950
-------	-------	-------	-------	-------	-------	-------	-------	-------	16.00	15.00	65.36	52.00	1585
-------	-------	-------	-------	-------	-------	51.64	51.64	48.00	-------	-------	67.08	50.00	1036
-------	-------	-------	-------	-------	52.28	-------	52.28	50.00	-------	-------	55.05	-------	1690
-------	-------	-------	8.13	8.00	-------	-------	-------	-------	6.86	4.93	41.58	30.00	266
-------	-------	-------	-------	-------	-------	-------	-------	-------	16.00	14.50	65.36	50.00	289
-------	-------	-------	-------	-------	50.44	-------	50.44	50.00	-------	-------	53.46	42.00	290
-------	-------	-------	-------	-------	48.86	-------	48.86	48.00	-------	-------	51.82	42.00	320
-------	-------	-------	-------	-------	13.02	-------	13.02	12.00	-------	-------	15.26	14.00	1497
-------	-------	-------	-------	-------	45.86	-------	*45.86	49.00	-------	-------	48.76	46.00	1664
-------	-------	-------	-------	-------	-------	-------	-------	-------	15.45	15.00	63.18	54.00	1665
-------	-------	-------	-------	-------	-------	-------	-------	-------	16.00	15.00	65.36	50.00	672
-------	-------	-------	-------	-------	12.16	-------	*12.16	12.40	-------	-------	14.40	15.00	1716
-------	-------	-------	-------	-------	-------	-------	-------	-------	15.88	15.25	64.96	52.00	478
-------	-------	-------	-------	-------	3.20	5.42	8.62	5.00	*7.12	9.00	55.02	46.00	477
-------	-------	-------	-------	-------	-------	-------	-------	-------	15.80	15.50	64.57	-------	16
-------	-------	-------	-------	-------	13.08	-------	13.08	12.00	-------	-------	15.37	14.00	228

*Constituent falls below guaranty.